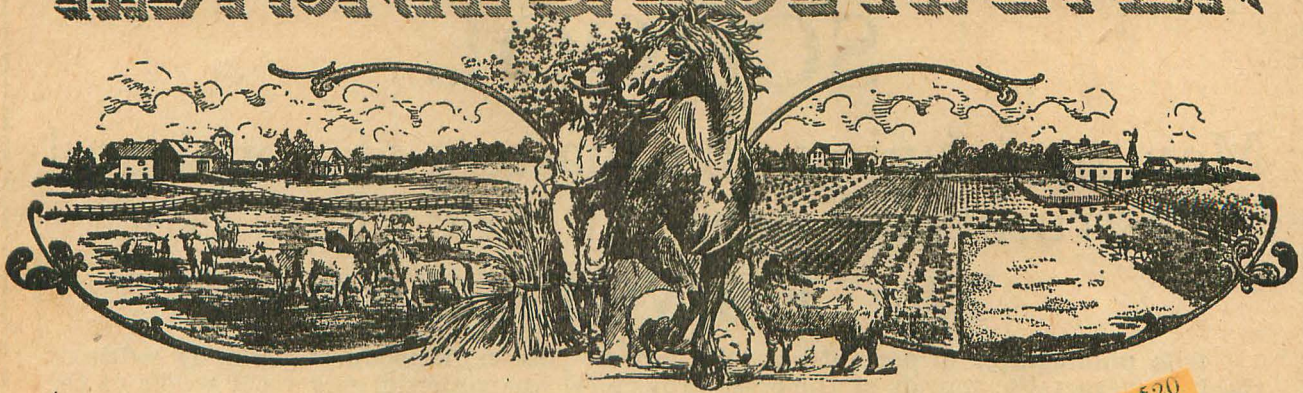


THE NORTH DAKOTA FARMER



"With Malice Toward None"

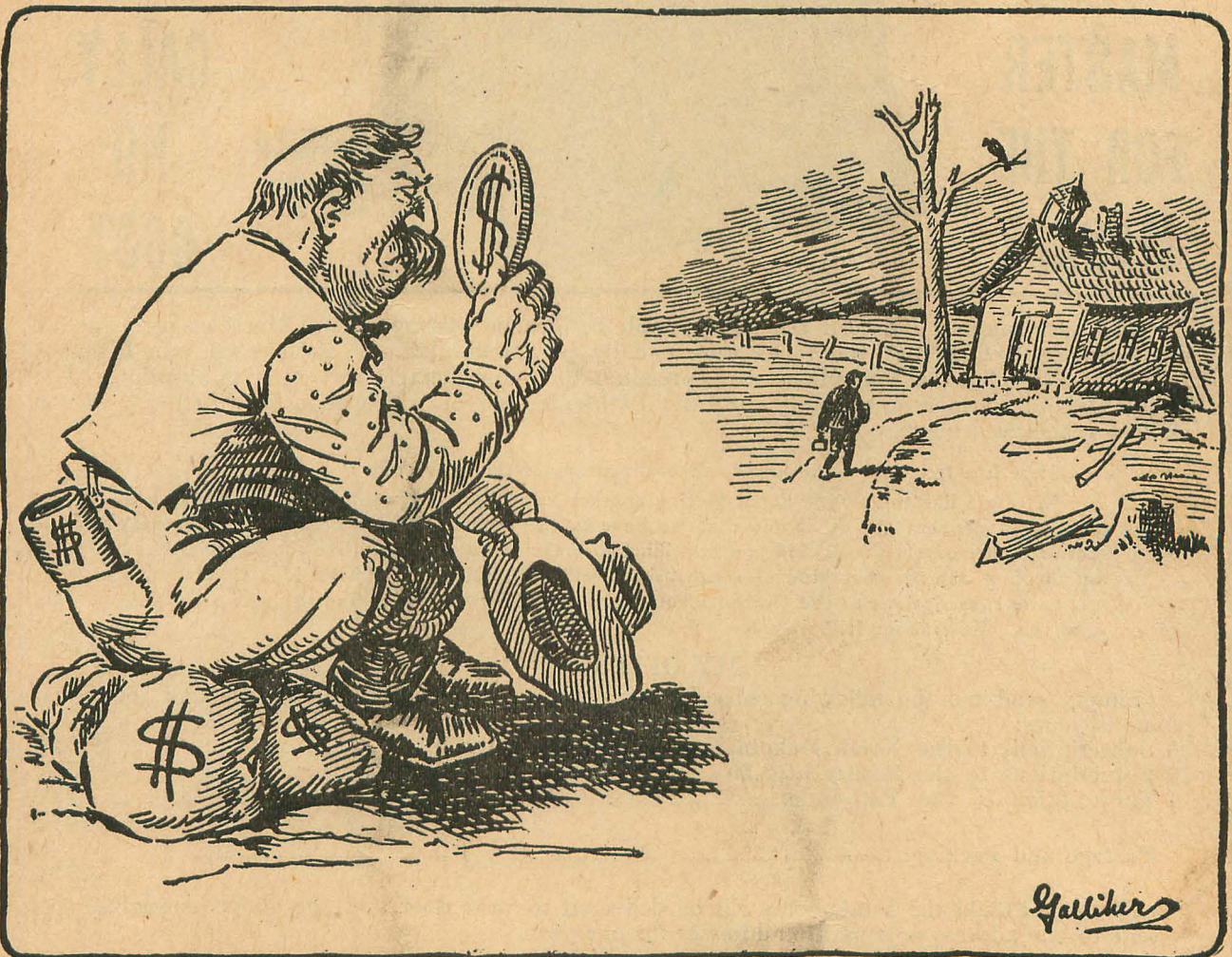
Lisbon, N. D.

October 15, 1917

Alex Alin

Vol. 19, No. 4

AND THERE'S A REASON



MONEYBAGS: "As far as I can see this rural school uplift is all bosh. What was good enough for me is good enough for the boys and girls nowadays." Strange how a little extra tax will distort vision.

978.4

N814

Graham

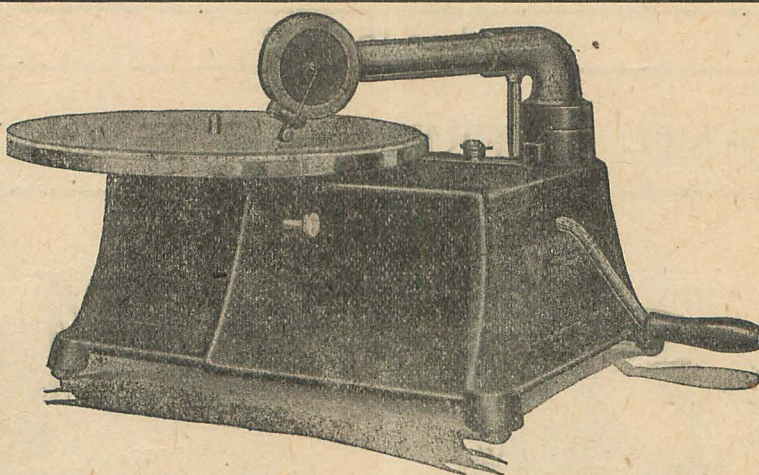
THE HOME AND THE SCHOOL

May now enjoy the masters of vocal and instrumental music at little or no cost

The VANOPHONE

This phonograph is portable, weighs but 12 pounds, reproduces perfectly (without the hollow, metallic sounds of the brass projectors) instrumental and vocal music of the highest quality. It is no toy. It plays 6-inch, 8-inch, 10-inch or 12-inch standard records. It sells for \$12.

**A
MUSIC
MASTER
FOR THE
MASSES**



**AT
PRACTI-
CALLY
NO
COST**

The past summer I played this phonograph beside one costing several times as much and I was surprised to find that the tones were equally pure and distinct. So pleased was I that I determined to offer the Vanophone as a premium for subscribers to my two publications: The North Dakota Farmer and Rotary, and the Pathfinder, all of which should be in every North Dakota school and home.

Here is a letter from the first to take advantage of the above offer:

"I would like to ask you about getting another Vanophone. I want to get one myself and also to supplement the other one that we have in the school. The first one is a great deal better than I expected. Would you be willing to make us another offer like the one you made on the first one or what kind of a proposition will you make? I have an idea that we can get more subscriptions to the North Dakota Farmer and we will be willing to make up a cash sum too. How about it?"

MY OFFER

Simply send me the following subscriptions at the regular subscription price and the Vanophone is yours:

8 Subscriptions to the North Dakota Farmer at \$.75.....	\$ 6.00
10 Subscriptions to the Rotary at \$.50.....	5.00
1 Subscription to the Pathfinder.....	1.00
	\$12.00
Postage and Packing.....	1.00
	\$13.00

For only \$13.00 the Vanophone will be delivered to your door and the above magazines will be sent to one address or separate addresses for one year.

SPECIAL. Should you find that you cannot secure the above number of subscriptions, let me know the number you can secure and I will name a part-cash payment.

W. G. CROCKER, Publisher, Box F, LISBON, NORTH DAKOTA

THE NORTH DAKOTA FARMER

Vol. 19, No. 4

LISBON, N. D., OCTOBER 15, 1917

75 Cents a Year

The Farmer, the Cornerstone of Civilization

By Theodore Roosevelt

(Copyright, 1917, by George H. Doran Company)

I. American Farmers in Peril of Becoming Tenant Class

(Editor's Note—This is the first of a series of three articles by Col. Roosevelt on "The Farmer, the Cornerstone of Civilization.")

Recently an Indiana woman was peeling some potatoes, and in a hollow in one she found a note from the southern farmer who had raised the potatoes running:

"I got 69 cents a bushel for these potatoes. How much did you pay for them?"

She wrote back:

"I paid \$4 per bushel."

The farmer sent her just one more letter. It said:

"I got 69 cents for those potatoes. It could not have cost more than 31 cents to carry them to you. Who got the other \$3? I am going to try to find out."

It is idle to say that when such an occurrence is typical—and it most certainly is to a large extent typical—there is no cause for uneasiness. Something is wrong. It may be wholly the fault of outsiders. It may be at least partially the fault of the farmers and of those who eat the food the farmers raise. The trouble may be so deep rooted in our social system that extreme caution must be exercised in striving for betterment.

But one thing is certain. The situation is not satisfactory and calls for a thoroughgoing investigation, with the determination to make whatever changes, including radical changes, are necessary in order once more to put on a healthy basis the oldest and most essential of all occupations, the occupation which is the foundation of all others, the occupation of the tiller of the soil, of the man who by his own labor raises the raw material of food and clothing, without which the whole fabric of the most gorgeous civilization will topple in a week.

Farm Issue Fundamental One

We cannot permanently shape our

course right on any international issue unless we are sound on the domestic issues; and this farm movement is the fundamental social issue—the one issue which is even more basic than the relations of capitalist and workingman. The farm industry cannot stop; the world is never more than a year from starvation; this great war has immensely increased the cost of living without commensurately improving the condition of the men who produce the things on which we live. Even in this country the situation has become grave.

The temporary causes of this situation have produced such effect in our land only because they aggravated conditions due to fundamental causes which have long been at work. These fundamental causes may all be included in one: the farmer's business in our country has remained almost unchanged during the century which has seen every other business change in profound and radical fashion. He still works by methods belonging to the day of the stage coach and the horse canal boat, while every other brain or hand worker in the country has been obliged to shape his methods into more or less conformity to those required by an age of steam and electricity.

Our commercial, banking, manufacturing and transportation systems have been built up with a rapidity never before approached. We have accumulated wealth at an unheard-of rate. There has been grave injustice in the distribution of the wealth, our lawgivers having erred both by unwisdom in leaving the matter alone, and at times by even greater unwisdom when they interfered with it. But on the whole the growth and prosperity have been enormous; and yet we have allowed the basic industry of farming, the industry which underlies all economic life, to drift along haphazard, we have allowed the life of the dwellers in the open country to become more and more meager, and their methods of production and of

marketing to remain so primitive that their soil was impoverished and their profits largely usurped by others.

Number of Tenant Farmers Grows

In 1880 one farmer in four was a tenant; and at that time the tenant was still generally a young man to whom the position of tenant was merely an intermediate step between that of farm laborer and that of a farm owner. In 1910 over one farmer in three had become a tenant; and nowadays it becomes steadily more difficult to pass from the tenant to the owner stage.

If the process continues unchecked, half a century hence we shall have deliberately permitted ourselves to plunge into the situation which brought chaos in Ireland, and which in England resulted in the complete elimination of the old yeomanry, so that nearly nine-tenths of the English farmers today are tenants, and the consequent class division is most ominous for the future. France and Germany are today distinctly better off than we are in this respect; and in New Zealand, where there is an excellent system of land distribution, only one-seventh of the farmers are tenants.

If the tendencies that have produced such a condition continue to work unchecked no prophetic power is needed to foretell disaster to the nation. Therefore, the one hopeless attitude, in this as in recent international matters, is "watchful waiting," sitting still and doing nothing to prepare for or to avert disaster.

It is far better to try experiments, even when we are not certain how these experiments will turn out, or when we are certain that the proposed plan contains elements of folly as well as elements of wisdom. Better "trial and error" than no trial at all. And the service test, the test of actual experiment, is the only conclusive test. It is only the attempt in actual practice to realize a realizable ideal that contains hope. Mere writing and oratory and enunciation of theory, with no attempt to secure the service test, amount to nothing.

North Dakota Experiment Valuable

This applies to the tenancy problem. It also applies to every other farming problem. As regards each, let us test the plans for reform, so far as may be, by actual practice.

For many of these plans the several states offer themselves as natural laboratories, where experiments can be tried when conditions and public opinion are right; and this altho the permanent remedies must ultimately, at least in major part, be national.

It is exceedingly interesting to watch such an experiment as that seemingly to be tried in North Dakota. This is a farming state, where the farming is the predominant interest, and inasmuch as all reforms cost money, and as even advisable reforms become utterly disastrous if in spending money upon them we treat "the sky as the limit," and decline to consider the proportion be-

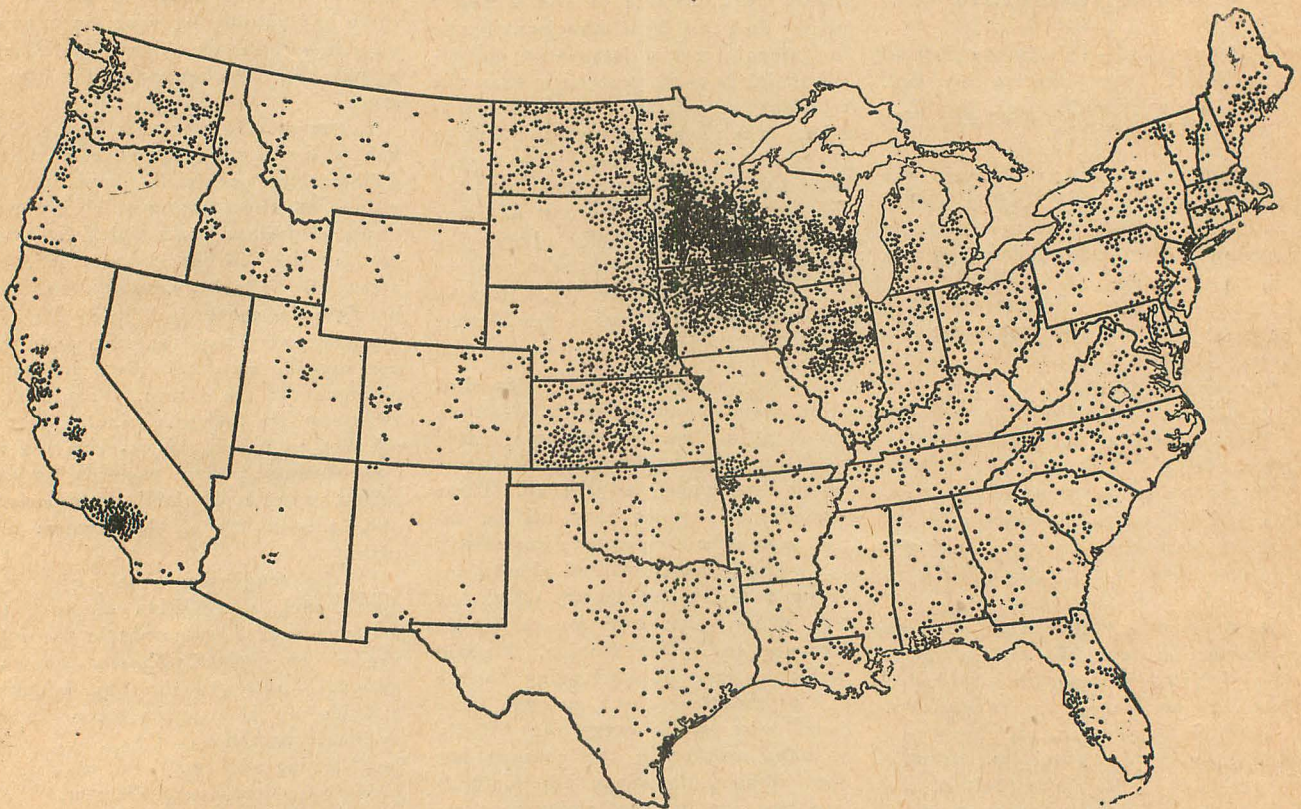
cieties among the farmers themselves. Present conditions should certainly be changed. To keep them unchanged is to act in a spirit of mere Toryism.

Farmer's Welfare Concerns All

From the North Dakota experiment, when put in actual practice, we can learn some things to follow and some things to avoid; and perhaps we can also learn to be wise in time, and, by sane determination to put in practice reforms that we are reasonably sure will have no bad effects, avoid the sad necessity of paying with our own skins for experiments which probably will have bad effects.

I greatly prefer to see the govern-

operation among the small landowners, so that their energies shall produce the best possible results; (4) by progressive taxation or in other fashion to break up and prevent the formation of great landed estates, especially in so far as they consist of unused agricultural land; (5) to make capital available for the farmers, and thereby put them more on an equality with other men engaged in business; (6) to care for the woman on the farm as much as for the man, and to eliminate the conditions which now so often tend to make her life one of gray, and sterile drudgery; (7) to do this primarily thru the farmer himself, but also, when necessary, by the use of



LOCATION OF ALL COOPERATIVE ORGANIZATIONS REPORTING TO THE OFFICE OF MARKETS AND RURAL ORGANIZATION.

tween what the reform achieves and what it costs, it is well that the farmers themselves should pay a good proportion of the cost of reforms necessary to and peculiarly affecting themselves.

In North Dakota, in addition to matters like hail insurance, it is proposed that the state shall purchase and operate grain elevators, mills and terminals and other business instrumentalities of vital concern to farmers. I most heartily commend the earnest effort the leaders in the movement have made actually to better conditions; and I say this altho from the facts at my command I judge that most of the work which it is thus proposed to have done by the state could be done better by co-operative so-

ment leave untouched whatever the corporations under government supervision can do; and just as far as possible I want to see all the corporations made into co-operative associations. But there are things so important that the government must do them, if it is only thru such exercise of collective power that they can be done.

Our object must be (1) to make the tenant farmer a landowner; (2) to eliminate as far as possible the conditions which produce the shifting, seasonal, tramp type of labor, and to give the farmer laborer a permanent status, a career as a farmer, for which his school education shall fit him, and which shall open to him the chance of in the end earning the ownership in fee of his own farm; (3) to secure co-

the entire collective power of the people of the country; for the welfare of the farmer is the concern of all of us.

Some Plan Should be Tested

The most important thing to do is to make the tenant farmer a farm owner. He must be financed so that he can acquire title to the land. In New Zealand the government buys the land and sells it to small holders at the price paid with a low rate of interest. Perhaps our government could try this plan, or else could outright advance the money, charging $3\frac{1}{2}$ per cent interest.

Default in payments—which should of course be on easy terms—would mean that the land reverted to the government. The experience of the

firms which have loaned to the largest number of people to acquire homes in small installment payments has been that foreclosure occurs in a very small percentage of cases; but it would have to be absolutely understood that no failure to pay would be tolerated; for such toleration would in the end discredit the whole system and work ruin to the honest and hard-working men who would pay.

We could follow the precedents established in connection with the reclamation act in the arid and semi-arid regions of the West. It would be desirable and entirely feasible to try the experiment first on a small scale, in experimental fashion; and then to apply it on a large and larger scale with the modifications shown to be necessary in actual practice.

To break up the big estates it might

be best to try the graduated land tax, or else to equalize taxes as between used and unused agricultural land, which would prevent farm land being held for speculative purposes. There can without question be criticism of either proposal. If any better proposal can be made and tried we can cheerfully support it and be guided in our theories by the way it turns out. But we ought to insist on something being done—not merely talked about.

Every one is agreed that we ought to get more people "back to the land;" but the talk on the subject is utterly useless unless we put it in concrete shape and secure a "service test," even altho it costs some money to furnish the means for doing what we say must be done.

last year were the largest ever shipped and California provided 71 per cent of the lemons consumed in America. The balance were imported.

In order to provide an efficient marketing medium for California farmers who have planted vegetables extensively in response to the requests of the government the Exchange is temporarily opening its marketing facilities to vegetable shippers.

GOVERNMENT CROP REPORT

Washington, D. C., Oct. 8, 1917.—A summary of the October crop report for the State of North Dakota and for the United States, as compiled by the Bureau of Crop Estimates (and transmitted thru the Weather Bureau), U. S. Department of Agriculture, is as follows:

Corn

State: Oct. 1 forecast 6,770,000 bushels; production last year (Dec. estimate), 13,515,000 bushels.

United States: Oct. 1 forecast, 3,210,000,000 bushels; production last year (Dec. estimate), 2,583,241,000 bushels.

All Wheat

State: Preliminary estimate, 58,600,000 bushels; production last year (Dec. estimate), 39,325,000 bushels.

United States: Preliminary estimate, 660,000,000 bushels; production last year (Dec. estimate), 639,886,000 bushels.

Oats

State: Preliminary estimate, 38,600,000 bushels; production last year (Dec. estimate), 53,750,000 bushels.

United States: Preliminary estimate, 1,580,000,000 bushels; production last year (Dec. estimate), 1,251,992,000 bushels.

Barley

State: Preliminary estimate, 23,500,000 bushels; production last year (Dec. estimate), 26,738,000 bushels.

United States: Preliminary estimate, 202,000,000 bushels; production last year (Dec. estimate), 180,927,000 bushels.

Rye

State: Preliminary estimate, 9,310,000 bushels; production last year (Dec. estimate), 4,655,000 bushels.

United States: Preliminary estimate, 56,044,000 bushels; production last year (Dec. estimate), 47,383,000 bushels.

Flaxseed

State: Oct. 1 forecast, 4,640,000 bushels; production last year (Dec. estimate), 8,137,000 bushels.

United States: Oct. 1 forecast, 11,300,000 bushels; production last year (Dec. estimate), 15,459,000 bushels.

A Model Co-operative Association

At the moment when the subject of farmers' co-operative associations again has come to the front because of unusual conditions and because of the necessity for economical marketing of agricultural products, the announcement is made by the California Fruit Growers Exchange that in the year closed August 31, 1917, it returned to citrus growers the enormous sum of \$33,611,000.

The California Fruit Growers Exchange long has been recognized as the largest co-operative organization of farmers in the world and has been the model held up to the agriculturists of America. Such authorities as Sir Horace Plunkett, Herbert Quick, Charles Holman and Charles McCarthy have made studies of its success and have sought to have its methods adapted to other localities.

According to the report for the year recently closed, the Exchange now markets 69 per cent of all oranges, lemons and grapefruit grown in California,—a business which last year totaled 15,492,990 boxes of citrus fruit. This tremendous volume of fruit was marketed at a cost of 4 3-4 cents a box and not a single penny was lost thru bad debts or other causes. The annual report points out that in the last fourteen years the business of the growers' organization has amounted to \$226,100,000, on which losses from bad debts and all other causes have been less than \$8,000, or 35-10,000 of one per cent. The total California citrus crop of last season amounted to 53,830 carloads.

The Exchange is composed of 8000 growers and acts as a clearing house

for the bulk of the California crop. Growers pool their fruit, which is then graded in 150 packing houses, and, under the direction of the central office, is distributed thru the organization's sales offices to all parts of the country. The service is performed at absolute cost.

The citrus industry has virtually been organized upon a manufacturing basis. For advertising in newspapers and other periodicals each box of oranges is assessed 2½ cents and every box of lemons 4 cents. Last year this netted a fund of nearly half a million dollars for publicity work. According to the report, the growers look to advertising to increase the consumption of oranges and lemons and thereby make room for the rapidly increasing crops. During the ten years in which advertising has been done, the consumption of citrus fruits has increased 80 per cent, or four times as rapidly as population.

The growers in the Exchange have their own mutual insurance compact. They operate a Supply Company which last year purchased for its members packing house and orchard supplies worth \$5,459,574. A large tract of timber land with saw mills and lumbering equipment from which box wood is made is owned and operated by the growers. In order to dispose of the unmerchantable lemons a By-products plant has been constructed which last year converted 6 per cent of the lower grades into citric acid and other by-products. The interests of the growers are guarded by a Traffic Department, a Legal Department and other staffs of experts.

The crops of oranges and lemons

Potatoes

State: Oct. 1 forecast, 5,290,000 bushels; production last year (Dec. estimate), 6,975,000 bushels.

United States: Oct. 1 forecast, 453,000,000 bushels; production last year (Dec. estimate), 285,437,000 bushels.

All Hay

State: Preliminary estimate, 1,875,000 tons; production last year (Dec. estimate), 3,554,000 tons.

United States: Preliminary estimate, 91,000,000 tons; production last year (Dec. estimate), 109,786,000 tons.

Prices

The first price given below is the average on Oct. 1 this year, and the second, the average on Oct. 1 last year.

State: Wheat, 203 and 125 cents per bushel. Corn, 126 and 85. Oats, 56 and 40. Potatoes 150 and 97. Hay \$10.10 and \$6.60 per ton. Eggs 32 and 23 cents per dozen.

United States: Wheat, 200.6 and 136.3 cents per bushel. Corn, 175.1 and 82.3 cents. Oats, 62.3 and 44.5 cents. Potatoes, 122.1 and 112.0 cents. Hay, \$14.29 and \$10.36 per ton. Cotton, 23.2 and 15.5 cents per pound. Eggs, 37.4 and 28.1 cents per dozen.

ers are assessing the farmers a discount against all wheat purchased, contending that such assessment is mandatory by reason of the official grain standards of the United States for wheat under the United States Grain Standards Act. Apparently the contention on the part of the country grain dealers is based upon the item "dockage" contained in the official standards. From information received by the department it appears, however, that the discount is actually an arbitrary assessment in the interest of the buyers, and is neither on the basis of the official standards nor required or contemplated by the act or the regulations thereunder.

Purpose of Grain Standards

The primary purpose in the establishment of these official grain standards of the United States was to provide a basis whereby parties to transactions involving the purchase and sale of grain shipped or delivered for shipment in interstate or foreign commerce might, thru being able to obtain a correct application of such standards, arrive at the actual value and make settlement accordingly. The standards for wheat do not provide for any arbitrary assessment for

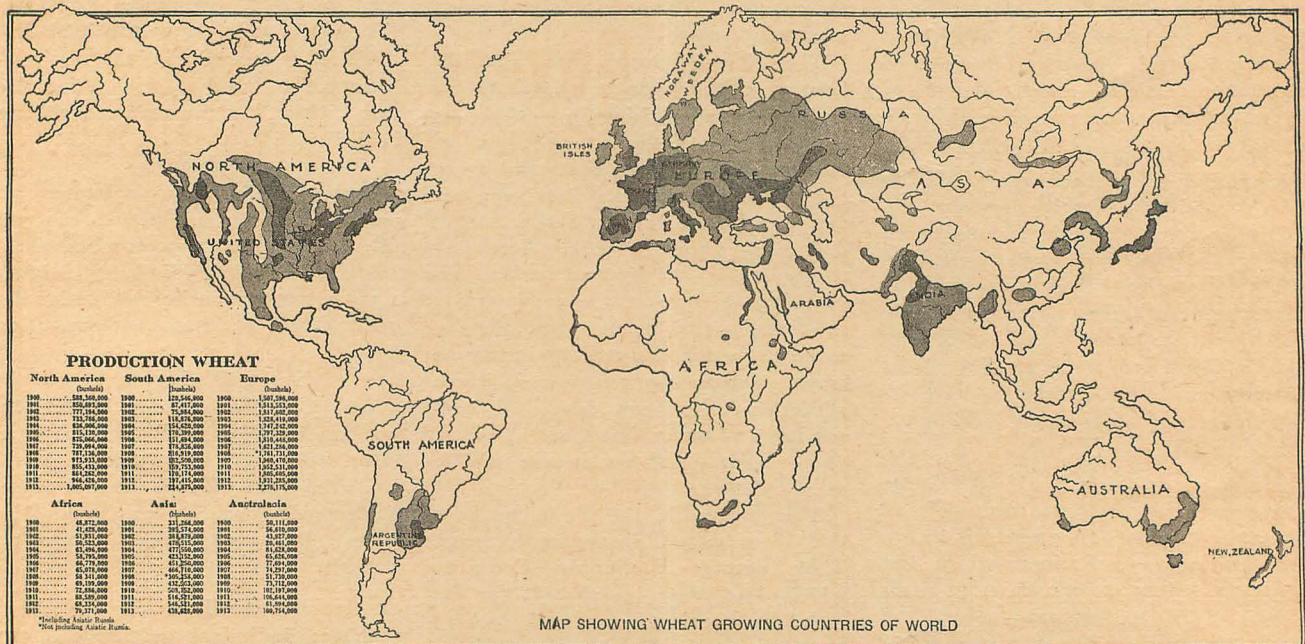
years in the Northwestern States prior to the adoption of the official standards.

The transactions in question appear to be purely local, not involving interstate commerce, and are perhaps conducted in a way not within the prohibitions of the act. Nevertheless, the department is investigating the matter and will be glad to have any facts which may be of value. It will do everything in its power to bring about the discontinuance of misrepresentation based on the act or the standards thereunder.

BANKERS AND AGRICULTURE

Pig and Calf Clubs Fostered—Money Available for Live-Stock Clubs

Bankers of many states are taking an active part in fostering boys' pig clubs, and other farm activities for both boys and girls. Indiana bankers, for example, are co-operating with state club leaders and county club supervisors and are furnishing money for livestock clubs, the money to be spent in buying pure-bred or high-grade animals. They say that their



Courtesy American Steel & Wire Co.

DISCOUNT AGAINST WHEAT

Department Investigating Party. Arbitrary Practice by Grain Dealers

It has been brought to the attention of the United States Department of Agriculture from several sources that, in certain parts of the country where this year's crop of wheat is now being moved, the country grain deal-

ers are assessing the farmers a discount against all wheat purchased, contending that such assessment is mandatory by reason of the official grain standards of the United States for wheat under the United States Grain Standards Act. Apparently the contention on the part of the country grain dealers is based upon the item "dockage" contained in the official standards. From information received by the department it appears, however, that the discount is actually an arbitrary assessment in the interest of the buyers, and is neither on the basis of the official standards nor required or contemplated by the act or the regulations thereunder.

communities need all of such stock that can be got, and they realize the need of good producers of milk, of meat, and of wool. The securing of such stock is bound to be to their advantage in the long run, because it means more prosperity for the farmers. The prosperity or the adversity of the town, they have found out, is lastingly bound up with that of farmers of the town, and they are doing what they can, in Indiana and else-

where, to bring about an era of pure-bred animals on every farm.

In Chemung County, N. Y., the bankers, mainly in Elmira, the county seat, have advanced money for the purchase of 40 pure-bred Holstein calves at \$120 apiece, to be used in connection with calf clubs. In Nebraska the bankers have not only been willing to furnish money for the hire of much-needed farm labor but have organized themselves into employment bureaus to help get the labor itself, which the farmer must have.

Much of this work of co-operation between city and country interests has been fostered by the club leaders and county agent employed co-operatively by the state, the Nation and by the farmers and business men themselves.

TWO METHODS OF CURING PORK

Hog killing time is coming. It is especially important this year that each family cure an abundant supply of meat. P. F. Trowbridge of the University of Missouri College of Agriculture offers two methods of curing pork:

Dry Cure

Do not cut up the pork till the carcass is well chilled. Make a mixture of clean fine salt 40 pounds, white or brown sugar 10 pounds, white or black pepper 4 pounds, red pepper one-half pound. This will make enough cure for about 1000 pounds of pork. If saltpeter is desired, use 2 pounds in the above mixture. It will give a red color to the lean meat but has a tendency to harden the meat too much. Chili saltpeter may be used instead of the regular saltpeter by taking about 20 per cent less.

Rub each piece of meat thoroly with the cure. Take special care to work the cure around the ends of bone of hams and shoulders. Pack skin down on a table or in a box in a cool airy place. Do not place in direct sunlight or in a damp musty cellar. After four or five days overhaul the meat, rub thoroly with the cure and repack; repeat this in about a week. Hams and shoulders should remain in the cure from 1-2 days to 2 days per pound weight of piece; the latter time is safer for meat that is to be kept during the summer. Bacon should be in the cure a shorter time. Ten days will give a very nice mild cure to a six or eight pound piece.

Brine Cure

Make a brine by boiling 7 pounds of clean salt and 2 pounds of white or brown sugar with two gallons of water. If saltpeter is desired add

one-fourth pound. This gives about enough to cover 100 pounds of pork when well packed. Sprinkle a little clean fine salt in the bottom of the barrel, rub each piece of meat lightly with the salt, sprinkle a light layer of salt between each layer of meat. Put on a board and weight down with a rock. Allow to stand over night. Tip barrel on side and allow the liquor to run out. Cover the meat with the cold brine and allow to stand in a cool place 4 or 5 days. Overhaul, repack, and cover with the same brine. Repeat in about a week. Give the meat the same length of time for curing as with the dry cure.

When the curing is complete wash off the excess, cure and hang in the smokehouse. Meat kept in the cure too long should be soaked in warm water to remove the excess of the cure. Smoke with hickory, oak, apple, or any non-resinous wood. Avoid all wood of the pine family. With a continuous smudge the smoking can be completed in 24 hours. With intermittent smoking longer time is necessary as cold meat "takes the smoke" slowly. Wrap the meat to keep it away from the skippers. If

rats or mice get at the meat they open a way for the skippers. In damp weather cured meats will mold. This is not injurious except it is advisable to use up shoulders, as the mold grows in the cracks and calls for excessive trimming.

Driver Agents Wanted

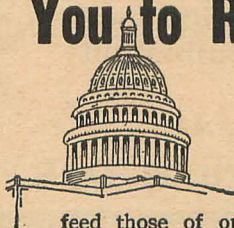
Drive and demonstrate the Bush Car. Pay for it out of your commissions on sales. My agents are making money. Shipments are prompt. Bush Cars guaranteed or money back. 1918 models ready. Write at once for my 48-page catalog and all particulars. Address J. H. Bush, Pres. Dept. 10 D. G. BUSH MOTOR COMPANY, Bush Temple, Chicago, Illinois

TRAPPERS

A trial shipment will convince you that we pay the highest prices for Furs, Hides, Pelts, etc. We remit you the day your shipment is received and charge no commission.

Write today for free Trapper's Guide No. 22, catalog of trappers' supplies and price list
NORTHWESTERN HIDE & FUR CO.
Minneapolis, Minn. Est. 1890.

Your Government Wants You to Raise More Live Stock



Government officials have found, by careful investigation, that there is a very serious shortage of live stock in this country. They state that unless farmers RAISE MORE HOGS, SHEEP AND CATTLE, especially now that we must feed our own soldiers and help feed those of our allies, famine conditions may result. YOU WANT TO DO YOUR "BIT"—DO IT RIGHT NOW. Increase your live stock at once. It will pay you well. You are bound to get

Higher Prices — Bigger Profits

But, don't forget that WORMS are the greatest enemies of live stock—greatest "profit-consumers." They cause 90% of live stock losses. Never before has it been as necessary to feed a good worm destroyer and conditioner as RIGHT NOW, and the best and cheapest remedy—one that is guaranteed—is SAL-VET, the old reliable live stock conditioner and worm destroyer. It costs but 2½¢ per month per head of hogs or sheep—horses and cattle a trifle more. It not only gets rid of the worms, but tones the blood, aids the digestion and makes stock thrive faster—KEEPS them healthier and SAVES feed.

"When I ordered the SAL-VET I had eight pigs that were at a standstill; they had not gained a pound in two months, and were four months old at the time. I fed SAL-VET as directed and the worms came from them by the dozen, some of them ten and twelve inches long. They have gained more in the sixty days than they did in the entire four months. SAL-VET also cleaned out an old horse on which I had tried several kinds of medicines."

R. K. COWARD, New Paltz, N. Y.

You can't afford to be without SAL-VET. It is the cheapest, safest, surest preventive against losses and pays big profits on its small cost. Ask your dealer about it; if there is none in your locality, write us. A postal brings a valuable live stock book, just issued, free. Send for a copy today.

THE FEIL MFG. CO., Chemists

Dept. 141

CLEVELAND, OHIO

282

POTATO DEPARTMENT

H. O. Werner, Secy. N. D. Potato Assn.

DIGGING POTATOES

H. O. Werner, N. D. Exp. Sta.

Every year potato growers lose heavily because of field frost. Sometimes the potatoes are so seriously

frosted that they are never dug. At other times when the frost injury is not so serious the potatoes are dug and shipped and the frost injury develops enroute and always creates trouble between the shipper and the receiver of the potatoes. To avoid this trouble it is best to dig the potatoes early and either ship them or get them under cover where frost will not injure them. Where the vines have been killed by frost they should be dug without delay as no more growth is taking place.

When digging potatoes it is well to let the potatoes lie exposed to the sun for several hours before picking them up so that the skins will become more firm. In order to avoid bruising it is advisable to empty the potatoes into the sacks from the picking baskets, rather than to empty them loose into the wagon box. When in sacks they can also be handled more conveniently. If put into storage the potatoes should be lowered into the cellar in the sacks rather than dumping them in, which may bruise many of them, thus opening the way for dry rot to set in.

Grading Potatoes

It will pay every grower shipping potatoes, especially to the large markets, to sort and grade his potatoes carefully. All irregular or knobby, sunburnt, or diseased potatoes should be thrown out. In grading they should be run over a 1 7-8 to 2 in. square mesh screen, all excessively large potatoes thrown out, and only the uniform graded potatoes marketed. The potatoes thus graded will bring a sufficiently better price to pay a profit on the labor of grading and the expensive waste of shipping culls and dirt to the market will be avoided. At the same time potatoes of only one variety should be shipped in one lot, as a mixture of varieties always brings down the price. First class potatoes should always be shipped in clean 2-bushel sacks.

Grading and sorting of a certain nature can be done in the field by picking up the best potatoes at one picking and then go along later and pick up the rest. This method, however, is less satisfactory than screening them. The cull potatoes can often be sold as such for a fair price.

POTATO WEEK

Make Special Effort to Eat Potatoes October 22 to 27, Inclusive

Three purposes will be accomplished by a Nation-wide potato week in which every one will make a special effort to eat potatoes during the week from October 22 to 27, according to the United States Department of Agriculture. The first of these purposes is to encourage the eating of the tubers because at that time it is expected that potatoes will be the most available and economical starchy food; the second is to save wheat during this period; and the third is to encourage the general use of potatoes as a wheat substitute by the American householder.

It is proposed that consumers make a special effort to eat potatoes prepared in different ways, recipes for which can be obtained from the home economics departments of the various state colleges of agriculture, or from the U. S. Department of Agriculture. It is not supposed that this potato week will of itself have much effect on the potato situation, but it should call the attention of the people to the fact that there is a plentiful supply which should be used in domestic commerce, leaving the more readily transportable grains for export trade. In shipping potatoes about four-fifths of the weight is water; in shipping wheat only one-eighth is moisture.

The Department does not claim

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Don't buy a roll of roofing from anybody, anywhere, (including myself) unless you get a written guarantee. Don't take anybody's word about quality, make them prove their claims.

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SEED WINTER RYE

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We can rebores and grind your cylinders, fit new oversize pistons and rings, make and fit new crank pins, straighten shafts, bore and bush gears and clutches or do any kind of machine work. Refue boilers and replace stay bolts. We carry in stock all sizes of stay bolts, patch bolts, bracket bolts, rivets, boiler flues, stay-bolt taps and boiler taps, shafting, shaft hangers, cast iron pulleys, wood split pulleys. Write and let us quote prices on any work you have.

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P. O. Box 295.

Telephone 554 W.

any originality for the idea of a potato week. The same plan has been in effect for a number of years in respect to raisins, for which there is a national raisin day, established thru extensive advertising by the raisin industry of California. The same thing has been done in respect to oranges by the citrus-fruit associations. The purpose of the days is to increase the general consumption of these products by acquainting the people with their food value.

A Potato Dish for Each Day in the Week

It is said that potatoes may be cooked in more ways than any other vegetables, and a score or more variations are within the knowledge of any good hotel chef. Seven ways, one for each day in the week, beginning with Monday's, Tuesday's, and Wednesday's dinners, thru Thursday's lunch, Friday's dinner, Saturday's lunch, and Sunday's supper are here given.

Stuffed Potatoes: (Monday) Cut baked potatoes in half, remove the pulp; mash it; add enough milk for the usual consistency of mashed potatoes, and season with butter, salt, and pepper. Fill the baked skins with this mixture, dot the tops with butter and bake for eight or ten minutes in a hot oven. To vary this add to the mashed potatoes, before the skins are filled, any one of the following: beaten white of egg (1 egg to 3 medium-sized potatoes); grated cheese (one-half cupful to 3 medium-sized potatoes); chopped meat (one-half cupful to 3 medium-sized potatoes); chopped parsley (1 tablespoonful to 3 medium-sized potatoes).

Scalloped Potatoes: (Tuesday). Use raw, thinly sliced potatoes in layers, each layer to be sprinkled with flour, butter pepper, salt; lastly, pour in just enough milk to be seen thru the top layer, and then bake for about an hour, or until the potatoes are tender. This may be varied by adding, in layers, hard-boiled egg, sliced; grated cheese; or minced ham.

Boiled Potatoes: (Wednesday): Select potatoes of uniform size; wash them with a brush; and plunge them into boiling salted water (1 teaspoonful salt to 1 quart water). Cook

them with the cover of kettle ajar, until tender, from 20 to 30 minutes. Drain the potatoes; remove the skins; dress the potatoes with butter if desired; and serve them immediately. If it is necessary for the potatoes to stand a few minutes before being served, cover them with a cloth, not a lid, in order that the steam as it condenses may be absorbed by the cloth and not returned to the potatoes to make them soggy. This is the reason for serving potatoes in an uncovered dish. The potatoes may be sprinkled with chopped parsley.

Potato Salad: (Thursday, from Wednesday's left-overs). Use six cold-boiled potatoes; 4 tablespoonfuls salad oil or melted butter; 2 tablespoonfuls vinegar; one-half tablespoonful salt; Cayenne pepper; 2 tablespoonfuls chopped parsley; few drops onion juice.

Cut the potatoes in one-half inch cubes. Make a dressing by mixing thoroughly the other ingredients. Pour this dressing over the potatoes, and allow them to stand for 15 minutes. Drain off any dressing that may not have been absorbed by the potatoes. Garnish the salad with sprigs of parsley and serve with cream dressing or mayonnaise. To the salad may be added any of the following: 1 cupful chopped celery; 2 cucumbers, chopped; or 2 hard-boiled eggs, chopped or, as a garnish, sliced.

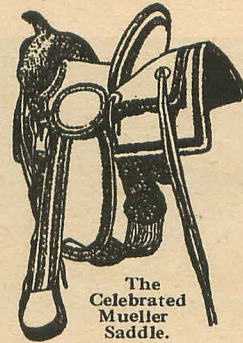
Mashed Potatoes: (Friday). Thoroughly mash cooked potatoes. Add four tablespoonfuls of hot milk, one tablespoonful of butter, and a little salt and pepper, to each pint of potatoes. Beat the mixture with a fork until

light and pile it lightly in a hot serving dish.

Mashed potatoes may be shaped into small cakes. Brown them in a frying pan in a small amount of hot fat. Mix with boiled codfish, or canned salmon, for fish cakes.

Potato Soup: (Saturday, from Fri-

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Mfgs. of Justin's Celebrated Cowboy Boots. NOCONA, TEXAS

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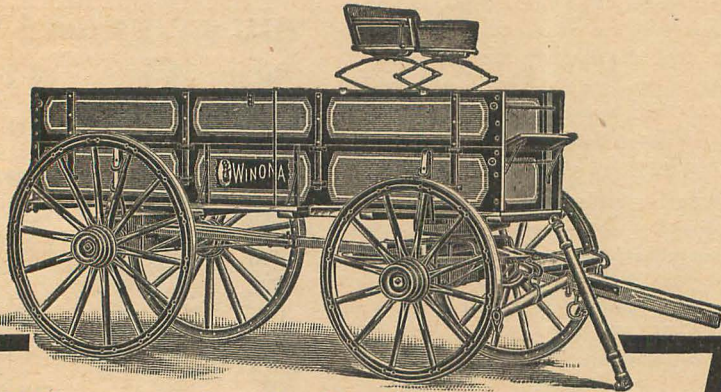
day's left-overs). Two cupfuls hot rice or mashed potatoes; 1 quart milk; 2 slices onion; 3 tablespoonfuls butter; 2 tablespoonfuls flour; 1 1-2 teaspoonfuls salt; celery salt; pepper; Cayenne; 1 teaspoonful chopped parsley.

Scald the milk with the onion; remove the onion; add the milk slowly to the potatoes. Melt the butter; add to it the dry ingredients, stir the mixture until it is well blended. Add this to the liquid mixture, stirring constantly, and boil the soup for one

minute. Strain it if necessary, add the parsley, and serve.

Potato Biscuit: (Sunday, from Friday's or Saturday's left-overs). 1 cupful mashed potatoes; 1 cupful flour 4 teaspoonfuls baking powder; one-half teaspoonful salt; 1 tablespoonful butter; 1 tablespoonful lard; milk, about one-half cupful.

Sift the dry ingredients. Add these to the potatoes; mixing with a knife. Work the fat into this mixture lightly. Add gradually enough milk to make a soft dough. Toss the dough onto a floured board, pat and roll it lightly to one-half inch in thickness. Cut it into shapes with a biscuit cutter. Place the biscuits on greased pans and bake 12 to 15 minutes in a hot oven.



The Wagon that's Built for Service

WINONA Wagons are built to make good in hard, steady road and field use. Extra strong where extra strength is needed. Made from "bone dry", time seasoned oak and hickory, ironed "for keeps."

WINONA FARM WAGONS

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Experiment Station

ALFALFA HAY FOR HORSES

"Alfalfa hay if properly fed is the most valuable horse feed available for the average Kansas farmer" is the claim of W. C. Campbell of the Kansas Agriculture College. He adds, "It should be remembered that the alfalfa hay must not be cut until it is quite mature; it must be free from dust, mold or smut and it must be fed in limited quantities. As to the amount to be fed experience seems to indicate that about one pound per day per one hundred pounds of live weight is the maximum amount for the work horse."

DANGER IN FEEDING CATTLE GREEN FLAX, STRAW AND SCREENINGS

Several cases of cattle being poisoned by eating green flax have been reported to the North Dakota Experiment Station. Mr. J. W. Ince made an investigation of flax poisoning in 1913 and sums up his findings as follows: "A careful study of the data shows at once that there is a decided difference in the percentage of prussic acid in green and brown flax material. In fact the basis of color can be used as the simplest test for the possible presence of this constituent. While all flax substances undoubtedly contain some of this poison, the quantities present in ripened or mature or bleached straw, chaff, etc., are so small that they cannot cause poisoning of stock if eaten in moderate quantities. On the other hand the presence of prussic acid in young and other green flax samples is quite large and will undoubtedly cause death of cattle." It is a good plan to feed small quantities of flax straw at first to determine if it is harmful.

JUST PUBLISHED

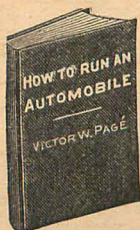
How To Run An Automobile

By Victor W. Page, M. S. A. E.

Price \$1.00

178 Pages

72 specially made Engravings



This treatise gives concise instructions for starting and running all makes of gasoline automobiles, how to care for them, and gives distinctive features of control. Shows the control groups of all popular makes of automobiles and describes every step for shifting gears, controlling engine, etc.

It is impossible to get the greatest efficiency out of a car until you know every point in running, caring for and adjusting the machine. In this new book just the problems you are up against are solved in a way that you can easily understand, and so that you can immediately turn to your car and apply the knowledge.

A book every one has been looking for. Fills a real need among motorists, dealers, chauffeurs, repairmen and all who must handle different makes of cars.

ADDRESS: NORTH DAKOTA FARMER, : : LISBON, N. D.

The Best Nest Egg

Hens prefer a plaster of paris or wooden nest egg was the conclusion reached in tests made at the Iowa Experiment Station. Less than half as many eggs were laid in a nest without any nest egg. The glass nest egg was the least attractive to the hens. The hens also laid more eggs in the secluded than the exposed nest. It was also found that one nest is needed for each four or five laying hens. It is important that the nest be made attractive to the hen or she will likely hunt a place of her own in the barnyard or field to lay. The nests should be whitewashed once or twice a year inside and out and the straw changed frequently.

THE FARMERS' CLUB

Organization is necessary in the local farm community. The farmers' club can very well be the starting point in such an organization. It will develop the co-operative spirit thru acquaintanceship and a greater unity in thought and purpose. It has been found best to let the farmers' club be an educational and social organization. Then let the members who are interested in the same thing get together and form a business organization.

The farmers' club can often secure entertainments, as well as speakers versed in farming, medicine, law, finances, etc., to address them, thus bringing information that the individual farmers could not secure. There is another source of information that the individual farmer does not always use and that is the information and experience developed by the different farmers in the community. In the farmers' club this information can become the common property of all. There are so many advantages to be derived from the farmers' club that there should be one in every farm community.

SOW MORE RYE

In an interview in regard to rye Director Cooper of the North Dakota Agricultural Experiment Station states that it has proved to be a profitable and dependable crop to grow and that the acreage could profitably be increased from a million to a million and a quarter acres in North Dakota. In addition to producing a crop of grain it may produce a fall pasture if sown early. This also gives it the best chance of making a good crop the next year provided it does not get big enough to form joints in the fall even if it is not pastured. In most of the state the rainfall has not

been heavy enough to pack the plowing so that the soil is in fine condition for sowing the rye in the stubble. This can be done at a cost of 40 cents an acre for man and horse labor, plus about three dollars for seed. Then it will require no further work till harvest next July. Sowing a part of the farm to rye reduces the acre cost of operation, may produce some fall pasture, makes more certain a crop on a part of the farm, distributes the labor and offers good possibilities for profit.

dozen steers that we had to sell or for the 15 to 30 hogs that we had to market." These are expressions that are being made in all parts of the state this fall and they will likely be more the case next winter than they were last winter. It will pay to think hard before stock is sold and to puzzle a good deal over food for them. Stock are mighty valuable, in fact they come pretty near being the goose that lays the golden egg.

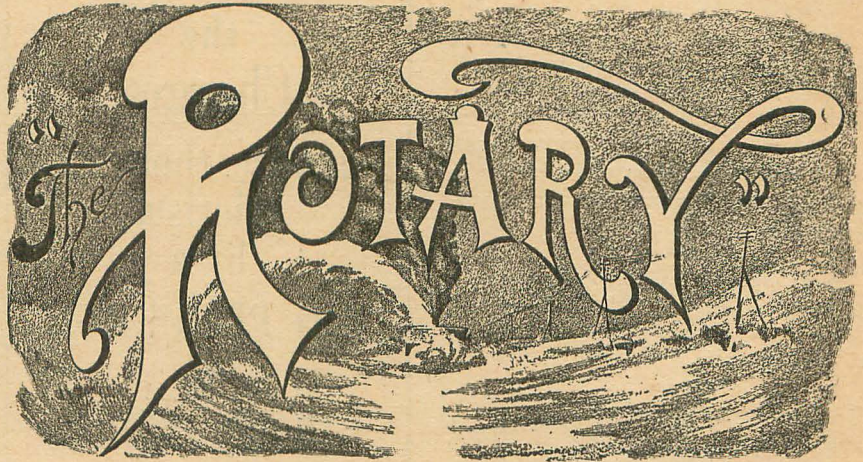
MILK FOR POULTRY

Milk is a good food for poultry. They like it either sweet or sour or as buttermilk. Milk contains some of the material needed in egg production.

THE VALUE OF STOCK

"Well, I don't know what we would have done this winter if it had not been for the cows, or for the half

UNCLE WILL'S MAGAZINE



As the Rotary Plow Clears the Track for Traffic
So the Rotary Magazine Opens up the Avenues of Learning.

The Rotary Follows the New Course of Study

SCHOOL BOARDS ARE ORDERING AS NEVER BEFORE
Order now if you would be sure of the September and October numbers of which we now have plenty.

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There is no greater incentive to the study of language and reading than Uncle Will's Magazine.

ADDRESS

THE ROTARY, BOX F, LISBON, NORTH DAKOTA

North Dakota Farmer

Entered as second class matter at the postoffice at
Lisbon, North Dakota

PUBLISHED EVERY MONTH

W. G. CROCKER : : PUBLISHER
Lisbon, N. D.

MANAGING EDITOR : W. G. CROCKER
ASSOCIATE EDITORS:
E. F. LADD J. H. SHEPPERD
O. O. CHURCHILL C. B. WALDRON
H. O. WERNER

Remittance may be made by draft, check,
money order, or stamps if it will accommodate.

Vol. 19 October, 1917 No. 4

Save the heifer calves and keep them growing.

The egg crop, \$600,000,000, equals in value the wheat crop. Keep hens, and more hens.

Seed corn is more precious than ever. Keep what corn you have protected from moisture and mice.

The farm should furnish 60% of the living of the farmer's family. If it does not, there is something wrong.

With wool at half a dollar a pound and more, there is certainly money in sheep. They are rivaling the aristocratic pig.

Next spring, we predict, many a farmer who parted with his cows this fall will have a sorry time of it trying to replace them.

When we fully realize that sunlight and fresh air are bitter foes of disease germs, our stables will be better lighted and ventilated.

Don't wait until January 1 to resolve that you will put the farm machinery in good shape during odd times the coming winter.

If the feed is short, and short it is in most sections, make use of the barley straw. Cattle will subsist upon it, even if they will not flourish.

Let every housewife sign the pledge found on page 20. No home is too humble or palatial not to be honored by the display of the Pledge Card in the window.

Be a patriotic wool grower. The comfort of the boys at the front depends largely upon the acts of the farmers who place upon their farms a flock of sheep.

Don't fail to read the series of articles by Col. Theodore Roosevelt. He is not only serving his country as near the firing line as he is permitted but is now, as he was when president, laboring for the uplift of the tiller of the soil.

The St. Paul Conference of last month, as we imagined it would, resulted in little benefit to the farmer or laboring man. Some of those who "came to scoff" at the government's policy "remained to pray" for leniency toward their alleged treasonable utterances. It will have accomplished much if the resolutions adopted are put into practice and the enemies in disguise go the way of the obnoxious I. W. W.'s.

Let The Farmers
of
NORTH DAKOTA
Prove False
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Charges
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BIG PURCHASE
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Liberty Bonds

Elsewhere you will find a pledge blank. Sign it and mail promptly to President E. F. Ladd, Food Administrator of North Dakota. Let every family in the Northwest enter upon this national campaign for food conservation.

What does it cost to raise a bushel of wheat? There is a price somewhere between 65 cts., the ridiculously low figures of a Kansas A. C. professor, and the average cost of \$3.54 in North Dakota claimed by A. C. Townley at the Alexandria meeting. Several years ago in Argentina the cost per acre to produce wheat was \$8.80; in Germany, \$7.60; in Minnesota, \$8.50. To this should be added at least 40 per cent on account of increased cost of labor machinery, seed, etc.

Seventeen times as much cheese, six times as much butter and fifteen times as much condensed milk were exported last year as the average three-year period before the war. The dairymen of this country must assume a weighty responsibility.

This comes from Cincinnati: "Cattlemen have always found it profitable to feed stock on the refuse of grain and corn furnished by distilleries and breweries, hence the high cost of meat." Think it over. It is the limit as an argument against prohibition.

If the government were to conscript men as some would have it conscript wealth, those very ones who demand such drastic action would themselves now be in the trenches wondering why the government was so poorly feeding and clothing them. The country's wealth and resources, just as the men, must be wisely conscripted.

One man in Kansas, with a team and a fanning mill, made \$500 in three weeks last year by following and cleaning the waste from threshing machines. Until the new standards made it almost compulsory, the farmers of this state in large numbers not only failed to clean up after the machines, but sent down to the Twin Cities their foul wheat, paying freight and losing by low grade and by dockage. A fanning mill is good for the complaint the farmer may have against the elevators and millers for excessive dockage and low grading. Clean the wheat.

By referring to the report on page 5 you will observe that this state will receive for wheat this year \$119,000,000 as compared with \$49,000,000 last year. Before harvest there was very little spare cash for investment in the first Liberty Loan. With \$70,000,000 more in sight than in June, the farmers of North Dakota will more freely respond, it is earnestly hoped. Our country needs every spare dollar. Buy a bond, even if you do run the risk of being branded by the envious a "bloated bondholder."

OCTOBER SPECIAL

This month we offer McCall's and the North Dakota Farmer for 90 cents. The regular price of both is \$1.50. Better send for magazine catalog. Some attractive offers are good only until November 10. Act at once.

Livestock Department

FARM AND STOCK NOTES

N. J. Shepherd

Proper training counts much in a dairy cow.

In shaping young trees always head them low.

The horse that is trained without blinds is generally the safer horse.

Rubbish of whatever kind should have no place in the fruit orchard.

Sacrificing reliable mothers has put many a farmer out of the hog business.

While the pigs are suckling feeding the sow means feeding the pigs.

Medium size with all the dairy quality obtainable marks the good dairy cow.

The care and development of a colt is almost as important as its breeding.

Wheat is a profitable fattening food for hogs but it should be ground or soaked.

The defects of the sow are as surely transmitted as are the strong points.

A good horse of any class is the product of good breeding and generous feeding.

Stable manure is the best general fertilizer that can be applied in the orchard.

If managed properly the pigs should not receive a check in growth at weaning time.

Rich butterfat cows can be made more numerous only by a careful selection and breeding.

The growing period while the animal is young is the time the frame is built.

Other things being equal, pigs from mature sires and dams grow faster and feed better.

Breeding animals that have weak constitutions and organic weakness will transmit these defects to their progeny.

The draft horse requires sound; strong underpinning to carry his heavy body and successfully move heavy loads.

A good growth the first year of the life of the colt costs less than at any other age.

The good dairy cow not only fattens the farmers bank account, but fattens his farm as well.

With horses, size with good actions are desirable qualities. Feeding the colt liberally means a larger and stronger horse.

Part of the stamina, durability, and spirit of a horse is inherited and part is produced thru proper feeding.

The horse that lacks action strength or endurance is curtailed in value no matter how stylish he may be.

The low chubby sow is seldom a good breeder, she does not produce a good sized litter and her pigs are rarely thrifty.

Diseased wood on a tree can never be made good again. Cut it off and allow another shoot to grow in its place.

A colt that is weaned without a setback and carried thru its first winter with a liberal ration of oats and bran is half made.

There is a great advantage in raising draft horses over any other breed in that the breeder is assured of a constant demand for his surplus animals at good prices.

Size is an important asset in teams to handle heavy machinery and big loads for power is more economically applied in large units than in small ones.

Weanlings who are halter broke, not only handle much nicer during their first winter but as a result of the taming process, they winter better, eat better and grow better.

A cow that has fallen off in her flow of milk to any considerable extent for a month or more cannot, as a rule, be restored to full flow until she is again fresh.

Hogs and poultry are good scavengers in the orchard as they destroy many insect enemies and also the fallen fruit which is often a harbor for protecting and developing these pests.

If a cow becomes excited, is abused, or disturbed in any way to cause her to worry and fret, it is very likely what is termed holding up her milk will follow.

The tree is dependent on its roots for the aggregate amount of moisture



Purebred Registered HOLSTEIN CATTLE

The undeniable facts that the Holstein-Friesian Association of America is the largest and most prosperous dairy cattle association in America, that its membership is over 7,000 more than the combined memberships of the other dairy cattle associations, and that it increased its membership by 1,260 during the fiscal year ending April 30, 1916, are primarily a fitting testimonial to the superior merits of the purebred Holstein-Friesian cow, that yields more milk for a day, for a year, for a life-time and for profit than any other cow. There is big money in the big "Black and White" Holsteins.

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Bixby's Red Polls

My herd bull, J. D. Merryweather, No. 24396, is the son of J. D. Millie, A. R. Grand Champion cow at Minnesota and Montana, in the 1915 show-ring and won the milk and butter contest with Guernseys, Jerseys and Brown Swiss competing with records of 600 pounds butterfat. J. D. Millie weighed 1280 pounds at thirty months old, and is full sister to the World's Champion two-year-old heifer. J. S. BIXBY, : : LISBON, N. DAK.

REGISTERED SHROPSHIRE AND HAMPSHIRE RAMS; also a limited number of ewes for sale; also Polled Durham Bulls, and Canadian Wild Geese. Our stock won many prizes at the North Dakota State Fairs the last three years. Price, reasonable. H. A. Strutz, Thompson, North Dakota.

A. R. BRED BULLS PRICED TO SELL
We are completely sold out of RED POLL bulls for the present but are offering a few choice GUERNSEY bulls, outstanding individuals of serviceable age, at from \$100 up. Write for folder describing the remarkable show ring winnings and production records back of our herd. Jean Du Luth Farm, Duluth, Minn.

Holstein Calves

10 heifers, and 2 bulls, 15-16ths pure, 5 weeks old, nicely marked and from heavy milkers \$20.00 each, crated for shipment anywhere. Edgewood Farms, Whitewater, Wis.

REGISTERED Polled Durham Bulls. One is two years. Others 5-6 months old, and Oxford, Schropshire, and Rambouillet Rams. (All Registered) Some of these Rams were first and Champion at Grand Forks and Fargo Fairs this year. The Pleasant Grove Farm, Reynolds, North Dakota, R. E. Strutz, Proprietor.

PERCHERONS

If you want a real good young stallion or mare you should come to my barn. You can buy at a lower price at the barn than anywhere else. All home raised and used to Dakota conditions. A square deal guaranteed. Wm. Steinbach, : : New Rockford, N. D.

Now is the TIME and this is the PLACE to buy

Shetland Ponies

FOR THE CHILDREN

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DR. J. A. H. WINSLOE, COOPERSTOWN, N. D.



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Worms and Bots

You can remove every one of them. We guarantee to kill and bring from the body, dead, in a very short time, all pin worms and bots, with the safe and sure remedy.

NEWVERMIFUGE

Absolutely harmless. Can be given to mares in foal before the eighth month. Horse owners write us that Newvermifuge has removed from 500 to 800 bots and worms from a single horse. An animal that is wormy can't help but be ugly and thin. If your horses are troubled with worms send us your order today. Price \$2.00 for 12 Capsules. BALLING GUN FREE with 6 dozen \$3.00, with 2 dozen \$5.00. Postage paid.

Farmer's Horse Remedy Company, Dept. B2, 592 7th Street, Milwaukee, Wis.

and plant food it receives. Therefore a tree that has made a good start in the development of its rooting system should not have its roots injured.

A cow to be of the most value should give a good flow of milk for ten months in the year, but she cannot hold out if she is not fed well and milked clean and regularly during the entire lactation period.

The buttermaker can easily control the amount of water in the butter.

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word TRY IT HERE.

HOLSTEIN AND GUERNSEY HEIFER AND BULL CALVES. Choice selected promising dairy calves, practically pure Holstein and pure Guernsey, but not registered, nice color. \$20.00 each, all express paid to any point in North Dakota and adjoining states.

Order two, you will be so well pleased you will want more.—Meadow Glen Yards, Whitewater, Wisconsin.

TEACHERS WANTED for all kinds of positions. Free enrollment. Send for blanks. School officials supplied with competent teachers. Write for list of candidates. Eastern Educational Bureau, New Egypt, N. J.

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If you have livestock to sell, you can reach a buyer thru the ad columns of the N. D. F.

To have it contain more water he works his butter when it is warm and to have less he works it when cold. The soft butter holds more water.

To be most profitable the sow should raise two litters each year and she must have a period of rest between farrowing times in order to renew her strength and be able to mother well the litter she is to produce. This means she must be well fed and cared for all the time.

FOR PERCHERON OWNERS

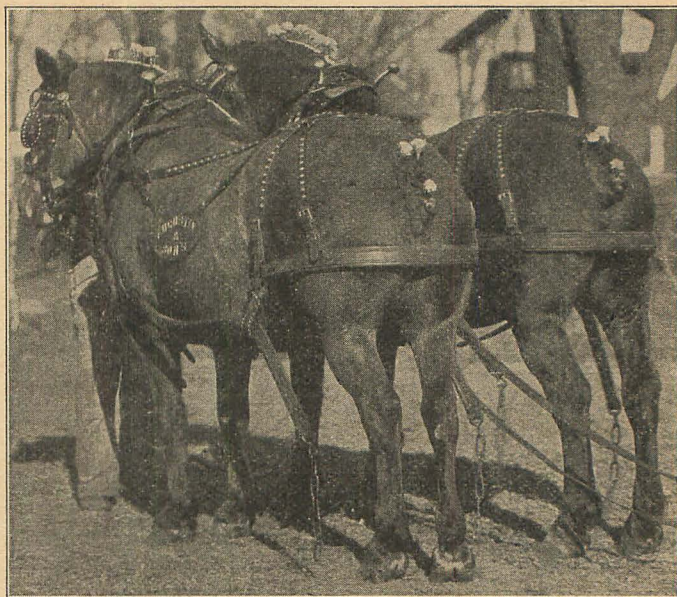
To Members of the Percheron Society of America:

Dear Sir: The annual meeting of the stockholders of the Percheron Society of America will be held at 8 P. M., Monday, Dec. 3, 1917, in the Florentine room, Congress Hotel, Chicago, Ill. We hope you will be present in person. Percheron judging at the International Exposition begins the following morning. There will be an extremely strong show.

due to horses taken from Belgium, northern France and Russia; Great Britain's to horses bought for war purposes. The decrease in France came during the first eleven months of the war; since then there has been a slight gain due to purchased war horses.

The United States had 21,195,000 horses Jan. 1, 1915, and 21,126,000 on Jan. 1, 1917—a very slight decrease, in spite of the fact that we exported 805,422 head during the 28 months ending Jan. 1, 1917. Mules increased from 4,479,000 Jan. 1, 1915, to 4,639,000 on Jan. 1, 1917, altho we exported 267,144 mules in the 28 months ending Jan. 1, 1917. Exports have continued at a heavy rate so far in 1917 and will undoubtedly continue while war lasts.

The supply of heavy horses is limited. The best informed men estimate that of our twenty-one million head, less than a million are real draft horses, weighing over 1600 pounds; and the demand for these efficient workers is such that they are



"\$100 per Head More than those Weighing 1200 pounds or under."

As producers of Percherons, we must never forget that our continued prosperity depends upon a prosperous condition in the trade for grade horses sold for commercial purposes. The latest available figures for European countries, supplied by Food Commissioner Hoover, show an actual increase in the number of horses in Germany and Great Britain since the war began. France shows a decrease of 914,000 head between 1913 and 1916, and all other European countries having available data show decreases except Sweden, where there has been a slight increase. Germany's increase is

holding their own in cities and increasing in popularity on farms. There is every reason to believe that the demand for drafters will continue to exceed the supply for at least twenty years yet.

The situation regarding pure bred Percherons seems especially encouraging. Seventy per cent report that all surplus Percherons of salable age are already sold; ten per cent report "fairly well sold out," and only twenty per cent report any considerable number of salable Percherons left in their communities. Sixty-one per cent report prices about the same as last

year, twenty-one per cent report higher prices, and only eighteen per cent report prices lower. Dealers who have made independent reports to the Society state that there are practically no three-year-old stallions left in the hands of the breeders, and that the majority of the two-year-old and a good share of the yearling stallions have already been bought up.

Consideration of all the facts we have painstakingly gathered leads to but one conclusion. There is a shortage of draft horses, which is not likely to be fully supplied for at least twenty years. Draft stallions are scarcer than they were and will be in demand to make more draft horses, out of mares that are 1400 pounds or over. Horses weighing over 1500 pounds, if sound and right, are bringing approximately \$100 per head more than those under 1200 pounds, and are averaging \$225 or better. Percherons of salable age are well sold out. Prices are steady or stronger in nearly all instances. The future for Percheron breeding is favorable, but the stock must be sound, well proportioned and well grown to be salable. Young stock especially should be well cared for. Grain can be saved in some degree by giving all the oat straw, corn fodder, and alfalfa colts will eat; but even with this allowance foals and yearlings should have daily at least three-fourths of a pound of grain per each hundred pounds live weight.

The time to keep up horse production is when the average man wants to quit. It pays in the long run.

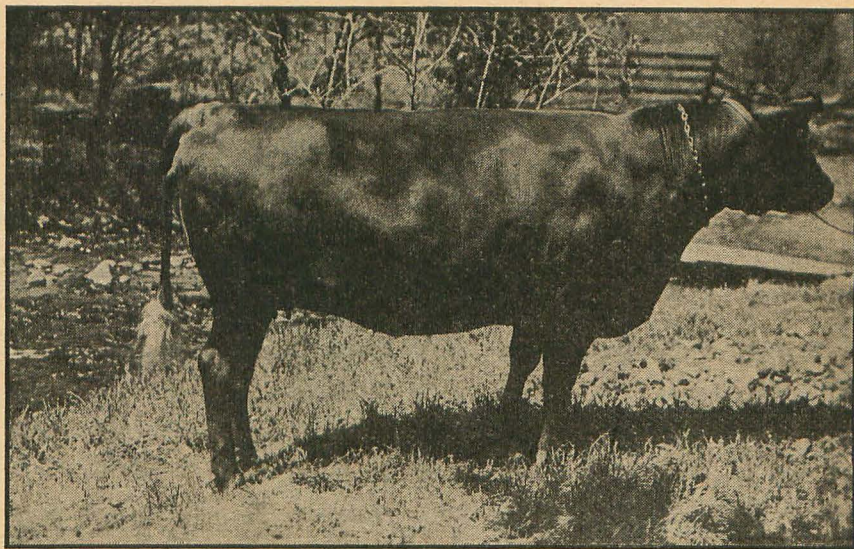
With best wishes for your continued success.

Yours truly,
WAYNE DINSMORE,
Secretary.

WHAT MAKES YELLOW BUTTER?

Everybody likes yellow milk and butter but sometimes the color is absent. This absence is especially noticeable in butter. Chemists investigated the cause of this variation in color as long ago as 1830 but it remained for the dairy department of the University of Missouri College of Agriculture to determine the real source and nature of the natural color of dairy products. Three years of investigation not only showed the cause of the natural color but made clear the nature and source of the yellow color that is found in the body fat of cattle. The color in the tallow is exactly the same as that found in butter. Cows that give yellow butter have yellow body fat while those which give a whiter butter have whiter body fat.

The coloring matter in both cases is carotin, so called since it was first found in carrots. The yellow color in milk and butter is not made by the animal but comes from the feed. This coloring substance is found in all green leaves, which accounts for the yellow butter in summer. By continued feeding of feeds free from coloring matter it was possible, in the experiments conducted by the Missouri College of Agriculture, to obtain white butter from a Jersey cow. As a result of the work a list of feeds that will give yellow butter and those that will not is available.



First Prize, Two-year-old Red Polled Heifer at Canadian Exhibitions Calgary, Red Deer and Edmonton, Alberta, Canada. Her weight, 1360 On Jean Du Luth Farm her first two dams average 531 pounds butterfat.

CORN SUBSTITUTES FOR HOGS

Farmers Can Reduce Amount of High-Priced Corn Fed to Hogs by Using Substitutes.

Farmers can reduce the amount of corn fed to hogs by substituting other feeds for corn. This is especially desirable with high-priced corn and its increased need for human consumption. Pastures and forage crops properly used can reduce the corn and other concentrated feeds fed to hogs from one-half to one-fourth. There are, moreover, many feedstuffs which can be substituted for the other portion of corn. Their use will be determined largely by their availability, relative feeding value, and cost per pound as compared with corn. Hog feeders, by getting in touch with the feed-manufacturing industries in their section, may discover profitable substitutes for corn. Feeds unavailable for human consumption should be used as far as possible.

A number of substitutes for corn

with suggestions for their use are given below. The feeding value, methods of feeding, and the highest relative cost of a pound of each feed to a pound of corn at which profitable substitution can occur are given for each feed. For example: A pound of feed with a feeding value four-fifths that of corn must cost at least one-fifth less before substitution is profitable purely from a monetary standpoint.

Oats after crushing have three-fifths the feeding value of corn. They can be substituted profitably for corn, therefore, when a pound of crushed

oats costs two-fifths less than a pound of corn. In a fattening ration, oats should not compose more than two-thirds of the ration during the early part of the feeding period and should gradually be reduced until, during the last 4 or 5 weeks, they are entirely omitted from the ration. Oats are excellent for adding bulk to a ration and are especially good for brood sows.

Barley when crushed is an excellent feed for swine and can be substituted entirely for corn, even when it costs the same per pound.

Rye when costing nine-tenths as much as corn per pound can be substituted for corn in the ration. It should be fed ground or crushed and is best fed as a slop.

Frosted wheat or wheat damaged in other ways and unfit for milling can be substituted even when equal in cost to corn per pound. Wheat should be ground, crushed, or soaked.

Emmer or spelt is a bulky grain. It can be substituted for corn when costing three-tenths less per pound. A partial substitution is best. This feed

should always be ground and is best when fed as a part of the ration along with concentrated heavy meals to give bulk to the ration. A combination of corn and emmer proves far superior to emmer alone.

Buckwheat can be substituted for corn when it costs one-tenth less per pound. It should be fed ground and is best as a partial substitute, for it tends to produce a poor quality of fat.

Millet can be substituted for corn when one-fourth cheaper per pound. Millet should be ground and fed always with a rich protein supplement. For fattening hogs in cold weather it is not so good and produces a soft pork.

Wheat shorts or middlings are a by-product of the milling of wheat. While a feed high in protein, it can be substituted for corn when one and one-tenth the cost of corn. It is best as a nitrogenous supplemental feed and when forming but a part of the ration. Owing to its heavy, pasty nature, if fed alone for a long while digestive troubles are liable to occur. No protein supplement is necessary for a ration of shorts, tho lime, in which shorts are low, should be supplied.

Barley feed obtained in the manufacture of pearl barley and barley flour has about the same feeding value as a mixture of wheat bran and shorts and can be substituted for corn meal when costing the same. No protein supplement is needed. It is rather bulky and generally used as a protein supplement when usual prices exist.

Pea meal can be substituted for corn when costing one-twelfth more than corn. It needs no protein supplement, but, owing to its close nature, should be fed with a bulkier feed. It is best used as a partial substitute. A fine quality of pork is produced by pea meal.

Weed seeds from grain elevators can be substituted for two-thirds of the corn in a ration. They should be ground and cooked before feeding.

Bakery wastes and ice cream cone wastes can be substituted for corn when available at reasonable prices.

Garbage is well utilized by swine. Care must be used in feeding to remove soap, washing powders, glass, etc., which may kill the pigs.

Blackstrap molasses when two-fifths cheaper per pound can be substituted as one-third of the corn in a ration. Its usual value commonly will prohibit such substitution.

There are many wastes and by-products from other industries, such as canning factories, which are of feeding value to swine. It should be remembered that, with bulky by-product feeds such as distillery grains,

brewers' grains, and pea cannery refuse, the hog, owing to his digestive system, can not utilize these as well as cattle and sheep.

When the prices of corn and of nitrogenous by-product feeds such as bran, peanut meal, soy-bean meal, velvet bean meal, linseed oil meal, tankage, fish meal, etc., are relatively close, a larger amount of these concentrates high in feeding value can be fed and partially substituted for corn. This will naturally increase the percentage of protein in the ration.

KEEP THE HORSES BUSY

The horse that works 1,000 hours a year and costs \$100 for feed, shelter, etc., is cheaper than the horse that costs but \$75 for keep and works but 500 hours. The former costs but 10 cents per hour worked, while the latter costs 15 cents. Wise use of the

farm horse to his fullest working capacity is thus of vital concern to the farmer, according to United States Department of Agriculture Bulletin 560, just issued, "Cost of Keeping Farm Horses and Cost of Horse Labor," embodying the results of the study of the records for 316 horses on 27 farms in Illinois, Ohio, and New York.

In Illinois 154 horses on 10 farms showed an average yearly cost for keep of \$100.65. The average yearly hours worked per horse were 1,053 and the cost per hour worked 9.56 cents. Records for 72 horses in Ohio showed an average cost of keep of \$120.27, average hours worked per horse 866, and cost per hour 13.09 cents. In New York the average yearly cost per horse of 90 horses on 10 farms was \$145.02, average hours worked 1,020, and average cost per hour 14.22 cents.



Poultry Department



SECRETS IN FOWL REEDING

Michael K. Boyer

"Secrets in Fowl Breeding" is the title of an old work by Geo. P. Burnham, of Melrose, Mass., and published by him in 1876.

In it Mr. Burnham says that a vigorous thoroughbred cock will impress his chief characteristics upon the progeny of hens of almost any color, in the first brood produced from such connection. But the chickens are mongrels, nevertheless. He has seen very fairly pointed and good colored Light Brahma chickens produced from a prime full-bred Light Brahma rooster mated to a flock of common variously colored barnyard hens. In the second year afterwards, the chickens coming from eggs laid by the pullets of the cross were like Jacob's coat "of many colors"; no two of either sex being at all alike. There was nothing thoroughbred in this process, or product, of course—and, in the nature of things there could not be.

The poultry breeder of our time should have a clearly defined aim in view at the beginning and if he acquires some knowledge of the true principles of breeding fowls, before he embarks too largely to invest or strike out for results, he will be the gainer in the end; and he may save time, money and patience, by going forward with his work understanding-

ly. I have time and again pointed out the advantages of starting in a small way and gradually forging to the front. This steady growth enables the poulterer to study every phase of the work, to learn how to care for the stock as well as how to mate for good, scientific results. The business must be carefully studied.

Mr. Burnham says to produce thoroughbred fowls, then, the leading secret of the formulae is to procure and cultivate only the best of the breed we choose to favor, and never to mix or amalgamate these with any other breed while we wish to have the product coming from them "pure"—bearing constantly in mind this patent fact, that when a fowl (or animal) of any fixed breed has been pregnant to another of a different variety and color, that fowl or animal is forever afterwards crossed; and the original purity of its blood is lost, in consequence of the connection with this other breed or variety.

Select from all of your flocks only the best birds, at any time. Mate them carefully for color, and avoid as much as possible the breeding together of males and females of the same age, or those which come from eggs laid by the same hen. Brothers and sisters make but indifferent breeders, and their chicks rarely prove valuable for mating at best.

Mr. Burnham says that the real secret of all the blemishes, "sports", discolored plumage, and imperfectly

feathered chickens produced from what are so often purchased for pure bloods is traceable to the error explained—at some time of their lives with themselves or their progenitors—committed by previous owners thru wrong management.

A very desirable "secret" to know is a knowledge of the successful method of making hens lay. Well we know that yearling and adult hens can be stimulated to an increase of egg-laying for a time, but this is at a cost of health and longevity.

At the present day there is a craze for heavy records, and while all true American breeders should be interested in getting the average egg production up to a higher figure, at the same time care must be taken not to have it overdone. Always mate from the best layers, and in that way gradually install into each generation the trait for good production, but never get those records by over-stimulation. There is only one method by which this purpose can be accurately accomplished, and that is by the introduction of a reliable trap nest. Go slow in the work, but do it well.

WHY NOT KEEP GUINEAS?

Guinea fowls, which have suffered unpopularity with farmers because of pronounced propensities for noise making during the sleeping hours of humans, are likely to rise above this objection in view of a steadily increasing demand for their delicious flesh, in the opinion of a poultry specialist of the United States Department of Agriculture. With eastern markets offering 75 cents to \$1.50 a pair for these fowls, guinea raising now is a profitable sideline on many of our farms, and may offer opportunities to the commercial poultryman in a few cases.

And as for that undesirable cry of the guinea, the department specialist admits that this is a rather objectionable habit, but declares that it might often be listed as an asset. It gives warning of marauders in the poultry yard and also, backed by a pugnacious disposition, constitutes an effective show of fight against hawks and other enemies. In fact, says the poultryman, some farmers raise a few guineas with their turkeys and allow them to roost together so that a warning will be given if any theft is attempted during the night.

Of the three varieties of guinea fowl—Pearl, White, and Lavender—Pearl is by far the most popular. It has a purplish gray plumage regularly dotted or "pearled" with white and is so handsome that frequently the feathers are used for ornamental pur-

poses. Breeding stock of the various varieties usually sells for \$2 to \$3.50 a pair, or from \$3 to \$5 a trio. Eggs from pure-bred birds for hatching can be obtained for 75 cents to \$1.00 for 15. During the last few years a limited market for guinea eggs has developed among commercial hatcheries which have an outlet for a few day-old guinea chicks along with their ordinary chicks, ducklings, goslings, and turkey poults. While guineas can be kept in the best condition upon free range, they can be confined if necessary and satisfactory results obtained.

A NEW SET OF FEATHERS

When chickens and other poultry molt, the experiment station asserts, they shed their old feathers and grow a new set. This makes a hard drain on the birds. Hens usually stop laying at this time. They are easily chilled which will delay their laying. The best layers usually molt late, which is the more reason for keeping the chickens well protected at this time.

The making of feathers requires good food. The grains, such as wheat, corn and oats are not enough. Some meat scraps from the house or the commercial meat scraps can be fed to good advantage. If the hens are chilled or improperly fed at this time it will delay the time for starting laying, and at the time when eggs are the highest price.

It seems to be a common habit with the White Leghorn chicks to pick at each other's toes until the blood comes, if not literally tearing the toes to pieces. I do not know of any positive remedy of this, but I have been successful in preventing it to a large extent by coating the toes of the chicks with vaseline. When the culprits pick at the toes of the victims they get the taste of the vaseline which is obnoxious to them, and they are likely to quit the habit. It is best to remove the chicks when they show a desire to pick at the toes, and the toes that have been picked will thus heal up rapidly.

The vast majority of poultrymen want good layers or good market fowls, and want them well bred; further than that, they care nothing. Today we have practical fanciers on every hand; men who breed for results, or who put results before feathers; therefore their flocks must be strong and vigorous, and among these strong, vigorous birds will be found many prize winners, or birds fit for such honors.

There are many reasons for chicks dying in the shell, the main ones being insufficient ventilation, or too much moisture.

SUCCESS WITH HENS

By Robert Joos

(Price, \$1.00, Postage, 10 cts.)

"The best reading matter for the poultryman we have ever read. It reads like a story and is full of good, sensible truths. One chapter is worth more than the price of the book. We unhesitatingly recommend it to the amateur or experienced poultry raiser as it covers the poultry business from start to finish."—Pacific Poultrycraft, Los Angeles.

Address: N. D. Farmer, Lisbon, N. D.

WONDERFUL EGG PRODUCER

Any poultry raiser can easily double his profits by doubling the egg production of his hens. A scientific tonic has been discovered that revitalizes the flock and makes hens work all the time. The tonic is called "More Eggs." Give your hens a few cents worth of "More Eggs" and you will be amazed and delighted with results. A dollar's worth of "More Eggs" will double this year's production of eggs, so if you wish to try this great profit maker, write E. J. Reefer, poultry expert, 3557 Reefer Bldg., Kansas City, Mo., who will send you a season's supply of "More Eggs" Tonic for \$1.00 (prepaid). So confident is Mr. Reefer of the results that a million dollar bank guarantees if you are not absolutely satisfied your dollar will be returned on request and the "More Eggs" costs you nothing. Send a dollar today or ask Mr. Reefer for his free poultry book that tells the experience of a man who has made a fortune out of poultry.

BIG MISSOURI ROSE COMB RHODE ISLAND REDS. Three choice pens. Five eggs from each pen for \$1.50. Blue Ribbon Strain, heavy winter layers. J. C. Guyer, Mandan, North Dakota.

PURE BRED S. C. Buff Orpington Eggs for hatching thru May and June, \$1.25 per 15. Mrs. Lydia Skeels, Westby, Mont., Box 72.

EGGS for Hatching from our prize winning Rose Comb Brown Leghorns, Rose Comb Rhode Island Reds and Single Comb Black Minorcas. \$2.00 per 15. Peter H. Levey, Fountain, Minn.

EGGS. PURE BRED S. C. W. Leghorn. Golden, White, Partridge, and Silver-laced Wyandottes. Rose Comb Island Red. Guineas. Runner and Pekin Ducks. Setting \$1.25; 100, \$6.00. B. Turkey, nine \$2.50. All eggs prepaid.

JOSIE ZENG

Walnut Grove, : : : Minn.

White and Columbia Wyandottes, Light Brahmas, and S. C. White Leghorns Over 30 years a breeder. Stock and eggs for sale. MICHAEL K. BOYER, Box 27, Hamonton New Jersey.

Hatching Eggs from a good strain of Pure Bred S. C. Rhode Island Reds, 15 for \$1.50; also a few Cock Birds and Cockerels for sale. E. N. Hedahl, . . . Mercer, N. D.

FOR SALE. Well Bred Up R. C. Reds. First prize winners; cockerels, \$1.25. Mrs. John Henderson, Br 228, Beulah, N. D.

PUREBRED BARRED PLYMOUTH ROCK eggs. One setting of 13, \$75 100 eggs, \$4.50 prepaid. Otto L. Albertson, Nunda, S. D.

White Langshan eggs, \$3.50 setting, F. Runner Ducks \$1.50 setting. Selma Shanander Dayton, Iowa.

FOR SALE. Silver-Laced Wyandottes. Eggs and baby chicks Mrs. Thos. Brady, Lansford, N. D.

Quality White Rocks

Hatching Eggs and Stock in season. We have the Best, O. A. Barton, Valley City, N. D.

School and Home

Our Country's Service

By Chore Boy

Tuberculosis

Tuberculosis is one of the most common diseases. It reduces the efficiency of the nation by rendering many unfit for work and by many dying in the prime of life,—passing away

very small and can float in the air without being noticed.

The sputum of a tuberculosis patient may contain millions of the germs. When it dries they can be spread far and wide.

The sputum should be cared for so

that the germs are destroyed. But in a great many cases this is not done. There are likely few who do not inhale the germs every once in a while. The safe way is to keep the body in condition to throw off the germs.

There is evidence that tuberculosis may be taken in the food and that milk from a tuberculous cow may give one tuberculosis. This is one reason for requiring milk from cows tested for tuberculosis. The tuberculosis germs are killed by heat so that anything that has been cooked or even pasteurized will be safe.

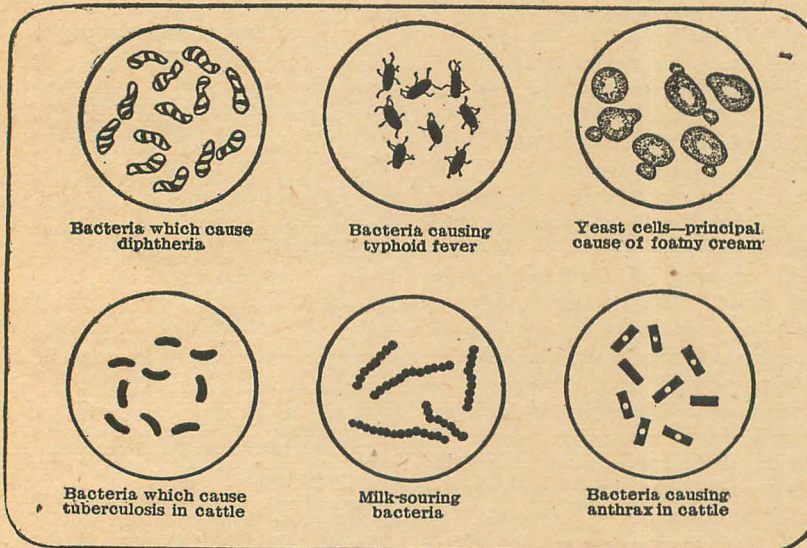
The person in the early stages of tuberculosis can often be cured by living in the open, eating nourishing food and resting. The nation needs the best efforts of each one. Let us keep ourselves in the best health so that we can each one do our work effectively and with pleasure.

Curing Meats

A good supply of cured meats should be provided on the farm. The difference between the price received for the cattle and hogs and that asked for the cured products are such that it pays to do butchering and curing of the meat on the farm.

A bulletin just issued by the Agricultural Extension Department of the North Dakota Agricultural College takes up the curing of meats of all kinds by salting, drying, smoking and pickling.

The smoking of the meat can be done in a barrel inverted with the hams, bacon, etc., hung in the bottom and the smoke led into the barrel

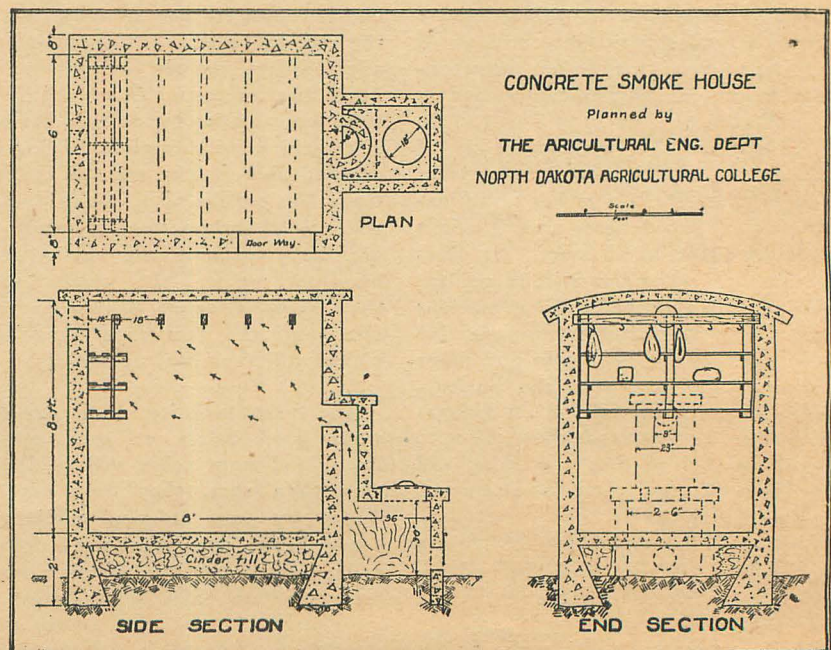


Bacteria Carried in Milk.

before they have rendered the world the service of which they were capable and which it would have given them pleasure and satisfaction to do.

The nation now needs the best efforts of each one, and the first requirement in doing good work is health. It becomes the patriotic duty of each one to guard one's health.

Good food, plenty of fresh air and especially at night, active work, a serene mind and living in sanitary surroundings are important factors in keeping well. The person who provides these things will be almost immune to tuberculosis or consumption. The lack of fresh air and especially at night weakens the body's resistance to disease and especially to tuberculosis. If a few of the germs get into the lungs when the body has been starved for fresh air the chances are good for them to be able to take hold and multiply. But if the lungs have had a supply of pure air all the time they would resist the tuberculosis germs. The tuberculosis germs are



A Cement Smoke House.

from the fire-place with two or three lengths of stove pipe. A good smoke-house as illustrated here can be used for storing the smoked meats as well as for smoking them.

This is especially important now that everything should be done to cut out unnecessary work as well as expense. Why use up car space shipping hogs to the packing plants and the products back again for use on the same farm the hogs came from and the farmers pay all who handle the product a profit as well as for their services. Home butchering and curing cuts out all this expense, and relieves the railroads of that much work.

SEWING IN RURAL SCHOOL

Leontina Pecinovsky, Mooreton,
North Dakota

Sewing should be taught in every school. The aim of sewing should be to teach the girls how to make their simplest clothes, how to use a pattern, how to select material and learn for what different goods may be used, how to select ready-made clothes, and how to dress neatly and suitably.

The teacher with an already crowded program may think it impossible to add another subject. To solve this problem the teacher may take the time from three to four on Friday afternoons and have the sixth, seventh and eighth grade girls sew. The boys may have manual training, rope work or anything in this line that the teacher may choose. While the upper grades are provided with sewing and the like the lower grades may weave baskets, draw or do any other busy work which the teacher may provide.

The sewing class may be divided into two groups. The first group consists of grades six and seven and the second group of grade eight. If the pupils have had no sewing before we may just have the first group consisting of the three upper grades.

I have Class I. make different articles from Class II. The articles for Class I. are models. That is, I have them make little doll garments and articles for the doll house.

I let the girls make doll garments in place of just making stitches, seams, etc., without making little clothes. I do this for six reasons: (1) The pupils learn on what garments different kinds of seams, stitches, hems, etc., are used and how to make them. A pupil may be told many times but he learns only by doing. (2) The doll garments have their use so the material is not wasted. (3) Children in the grades take more interest in making doll clothes than in making ordinary useless models.

(4) If any one article is spoiled the loss is not great; the goods are easily replaced. (5) The girls learn how large garments are made as the little garments must be finished like the big ones. (6) The girls have something to show for the time they put on their work. Children like to have visible results.

Group I. may make the following articles, all in small size:

- | | |
|------------------|-------------------|
| 1. Sheet | 10. Dusting-cap |
| 2. Pillow-case | 11. Petticoat |
| 3. Napkin | 12. Drawers |
| 4. Table-cloth | 13. Corset-cover |
| 5. Dish-towel | 14. Chemise |
| 6. Hand-towel | 15. Gingham-dress |
| 7. Tea-apron | 16. Rompers |
| 8. Nightingale | 17. Lawn-dress |
| 9. Kitchen-apron | 18. Night-gown |
| | 19. Kimono |

Have each pupil supply herself with a pair of scissors, a spool of white cotton thread No. 50, a small needle and a thimble. Two or more pupils may use the same pair of scissors.

The material needed will be cheap table damask for the tablecloth and napkins; pink outing flannel for the nightingales; gingham for the kitchen apron; dress and dusting cap; glass toweling or flour sack for the dish towels; crash toweling for the hand-towels; figured cotton crepe for the kimono; India linen or flaxon for the tea apron and lawn dress; gingham, calico or percale for the rompers; fine muslin or long cloth for the rest of the articles.

Have the pupils bring the large pieces of goods from their mother's scrap bag. In addition you will need to buy some of the material. The material may be furnished by the school board, the children may furnish their own material, or the teacher may have each child bring twenty-five cents to cover cost of material and do the buying herself.

The objections to having the pupils buy their own material are that it costs too much for each child and that material is wasted. Goods can be cut to a better advantage when cut from one piece. The method of having each child bring twenty-five cents to cover cost of material is good as the teacher can buy to better advantage than the pupils and can get just what is needed. The best plan is to have the schoolboard furnish the material after consulting the teacher or authorizing the teacher to do the buying. The cost of material need not exceed twenty-five cents for each child if the buying is carefully done.

Besides the above material mentioned the class will need narrow rick-rack braid, narrow bias tape, small

buttons, colored embroidery cotton and narrow ribbon.

The first month's sewing may consist of making a pillow-case, sheet, napkin, tablecloth, dish towel and hand towel.

Make the sheet out of long cloth or muslin, cutting it 10½ inches by 8 inches. Hem the sides with a narrow hem. Make the top hem ¾ inches and the bottom hem about half that width.

For the pillow case cut muslin 4½ inches by 4 inches. Fold over in half thus making it 2 by 4½. Sew down the side and top with a French seam. Hem the bottom with a ½ inch hem.

For the napkin cut damask 2½ inches by 2½ inches and make a narrow hem using the French method of hemming.

For the table-cloth cut damask 7 inches by 9 inches. Hem the sides with a narrow hem and the ends with a ½ inch hem.

For the dish towel cut glass toweling or flour sack 3½ inches by 3½ inches or 4 inches by 2 inches. Finish with a narrow hem.

For the hand towel use crash or huck toweling. Cut 2 inches by 4 inches. Hem sides with a narrow hem and ends with a wider hem. The ends may be hem-stitched and a hanger may be attached. Roller-towels may also be made. For these, cut crash 2 inches by 7 inches. Sew the two ends together with a felled seam.

The second month we may make the tea apron, nightingale, kitchen apron and dusting cap. For the tea apron use lawn or flaxon. Trim it with a narrow edge of lace after hemming. For the nightingale use pink flannel and blanket stitch it with colored cotton embroidery floss. For the kitchen apron and dust cap use checked or striped gingham.

Patterns will be furnished on request for the second month's work and also for the rest of the garments upon the receipt of a self-addressed envelope and a four-cent stamp to cover cost of mailing if you will address Leontina Pecinovsky, Mooreton North Dakota, care of Antelope Teacherage.

Next month's article will tell what to use for the other articles, how to make them and what to teach to Class II. in sewing and how Red Cross work may be done by grade pupils.

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It Will Pay You

THE CHARM OF GOOD TASTE IS ALWAYS SIMPLICITY

The Wool Trimmings Make Their Debut

There is a kind of breathless interest, in New York City, over the battle of the bustle and the straight silhouette. Today, one is sure that the



Semi-Fitted Dress of Velvet

long skirt and tunic, in other words the straight silhouette, is triumphant; tomorrow, there may be seen so many charming examples of the bustle frock, both on the street and on the stage,

that one thinks it surely will be accepted. However, at the present moment, the one-piece dress and the frock with the long tunic seem to be the favorites.

Simplicity Plus Charm

The slogan of "American Fashions" has brought out some wonderfully interesting things. Indeed, there is no reason why the American designers should not be the best judges of the styles most becoming and appropriate to the American woman. The slightly fitted waist, not unlike the first form of the basque, has a piquant charm when combined with the tunic that is longer in the front than the back, and the ankle-length skirt. It is truly the costume of the lady, and the illustration here shows some of the newest features of this style. The points of the waist are weighted with balls and chains in the form of amber beads. The beads are used instead of a tie, too, coming from under the collar. The velvet of the dress falls in charming folds, and the pointed collar and deep cuffs are of heavy satin. Needless to add that this is a costume for those occasions when one wishes to be particularly well-dressed, without having that "dressed-up" feeling.

The Suit for Afternoon Affairs

After all, there is nothing that can take the place of the coat suit, that old stand-by of ours. Made of velvet, velveteen or any of the soft woolen materials, it can be trimmed with fur, velvet, or left untrimmed, just as it pleases you. The one illustrated here is very simple indeed, the side-panel effect of the coat is one of the newest features of this season. Here the straight silhouette is apparent; the tight sleeves and the narrow skirt seem to emphasize it.

And So It Goes

Do you remember your dresses of 1913, the year before the war? If you have any of them put away, get them out, for the styles of today seem to be returning to that year for inspiration. Skirts are tighter than they have been. The much-talked-of bustle is not unlike the drapery we all wore then, and



The Straight-Line Silhouette

the sleeves are very much the same. Of course, there are small changes, and big ones, too, that every one can see.

HOLD THE LINE

A joyful army of women, a million and more strong, has already enrolled with the Food Administration.

From the windows of thousands of homes gleams the emblazoned card announcing that the family is pledged to food conservation.

In thousands of kitchens during the long summer busy housewives in the blue uniform of the Soldiers of the Commissary canned and planned to meet the enemy.

Faithfully you have guarded the altars of the home. Now, come forth from the kitchen! Lift your eyes to the light of a larger service! The task is stern—but the service boundless.

Take the solemn oath of allegiance to your country. Enroll for active duty with the Service Army of the Republic. Emblazon your colors, and follow the Flag.

THE NEW PLEDGE CARD

Pledge Card for United States Food Administration If you Have Already Signed, Pass This on to A Friend

To the Food Administrator:

I am glad to join you in the service of food conservation for our nation and I hereby accept membership in the United States Food Administration, pledging myself to carry out the directions and advice of the Food Administrator in my home, insofar as my circumstances permit.

Name.....

Street.....

City..... State.....

There are no fees or dues to be paid. The Food Administration wishes to have as members all of those actually handling food in the home.

Anyone may have the Home Card of Instruction, but only those signing pledges are entitled to Membership Window Card, which will be delivered upon receipt of the signed pledge.

will need additional labor to harvest the enormous crops expected. Additional labor on the farm, means extra work for the farmer's wife.

Will she, alone, be expected to carry the enlarged burden of the kitchen and home or will she persuade her husband to install for her labor-saving household devices? Who will keep the clothes clean?

Will the farmer's wife spend her days over the old-fashioned, obsolete wash tub and her nights over the old-fashioned ironing board? Or will she purchase a washing and an ironing machine?

Will she break her back and ruin not only her own health, but endanger that of the next generation by working over a wash board, or will she save her time, her money, and her health by using a washing machine?

In the rural home, the washing has to be done at home, where, for sanitary reasons, the family washing ought to be done. Why should it be done by old-fashioned methods?

If the intelligent farmer who has purchased up-to-date labor-saving implements for use in his work will but think about it, he will not permit his wife to kill herself and endanger the life of the coming generation doing her housework by ancient methods.

Farming in this country is daily becoming more and more of a science. Successful farming demands the latest labor-saving devices and machinery. The latest discoveries and methods concerning farming and dairying, such as the "Babcock test," etc., have made farmers become efficient in order to attain success. The same thought and attention which has been applied to farming and farm methods if applied to the daily household tasks would revolutionize the work of the farmer's wife.

Is the washing done in a scientific way in your home, Mr. Farmer? If not, why not?

Studies made by the U. S. Census Bureau have shown that the infant mortality among workers in textile mills is not so great as among women who live at home, and do their own work, which includes carrying water from the well to the house, doing washing by ancient methods, and emptying heavy tubs of water. If the one weekly burden of the family washing could be relieved the records of our State Boards of Health would not show that a larger percentage of babies die in the first month of life in the country than in the city.

There is but one way to relieve this weekly burden, and that is by purchasing and using a hand power, gasoline power, or electric washing machine.

NORTH DAKOTA SCHOOL LAW

For the first time since 1911 has the State published a volume of the School Laws, and not until 1919 will another edition be printed by the State.

WOULD YOU KNOW

For what reasons a pupil may be suspended or expelled?
Whether one is allowed to read the Bible in school?
What branches must be taught every day?
For what purposes the school house may be used?
Who may vote on school matters and what are the voters' qualifications?
How schools may be consolidated?
What recourse one has if he is not satisfied with the ratings of the examining board?
Whether free text-books may be adopted without a vote?
What to do when a pupil or parent disturbs the school?
What provision is now made for transportation of pupils?
How pupils may be compelled to attend school?
Whether children may be employed in stores and factories?
How a certificate may be revoked?
What the law is regarding drinking cups, fire escapes, hitching posts, school libraries, pension fund, accredited diplomas, etc.?

THEN ORDER A COPY OF THE LATEST SCHOOL LAWS

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The Best Known Boy In the World

From China to New York, and around the world the other way, to London, there is one boy who is known and loved above all others—and that boy is Tom Sawyer.

In him each man knows the image of his own boyhood, of its dreams, and its mischief. In Tom Sawyer each man sees the renewal of his own youth—each woman sees the son she loves—for Tom Sawyer is really the story of Mark Twain's own boyhood.

The Chinese mandarin chuckles when Tom makes the other boys pay him for doing his work. The little Russian trembles as he overhears Indian Joe plotting to rob the widow. Wherever men read, they shiver with Tom that fearful midnight when he saw the doctor murdered by a new-made grave.

And each man who reads knows his own mother in Aunt Polly, and wishes he had a chance to do it all over again and make it up to a long-suffering mother.

MARK TWAIN

Another Lincoln in Spirit

Mark Twain made us laugh, so that we had no time to see that his style was sublime, that he was almost Biblical in simplicity, that he was to America another Lincoln in spirit.

To us, to every one in the United States, he was just Mark Twain—well-beloved, one of ourselves, one to laugh with, one to go to for cheer. Mark Twain's smile will live forever. His laughter is eternal.

Now the trenchant pen is still. We know that a man who could write two such books as "Huckleberry Finn" and "Joan of Arc" was splendid in power.

All that is lovable and free—that is spectacular in American life, he has expressed. But above all, that intangible something that makes America what it is the world finds in Mark Twain. He is our Mark Twain. He is the great American. Europe so recognizes him. Asia so knows him.

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Seasonable Receipts

Mrs. Sadie Baird, Editor

Wheat Conservation Recipes

Note: In all the following proportions a half pint measuring cup is used, and all measurements are level. The flour is measured after sifting.

Yeast Cornmeal Bread No. 1

One and three-fourths cup liquid (milk and water), two tablespoons sugar, one tablespoon fat, two teaspoons salt, one-half cake compressed yeast softened in one-fourth cup liquid, one cup cornmeal, two cups flour.

Yeast Cornmeal Bread No. 2

One and one-fourth cup liquid (milk and water), two tablespoons sugar, one tablespoon fat, two teaspoons salt, one-half cake compressed yeast softened in one-fourth cup liquid, two-thirds cup cornmeal, two and one-third cups flour.

Yeast Cornmeal Bread No. 3

One and one-fourth cup liquid (milk and water), two tablespoons sugar, one tablespoon fat, two teaspoons salt, one-half cake compressed yeast softened in one-fourth cup liquid, two-thirds cup cornmeal, two and two-thirds cups flour. Each of the above proportions makes one loaf of bread.

Directions for Making Yeast Cornmeal Breads

Add sugar, fat and salt to liquid and bring to the boiling point. Add the cornmeal slowly, stirring constantly until all is added. Bring to the boiling point. Remove from the fire and cool. These proportions of cornmeal and water result in so thick a mixture that to add the given amounts of flour looks impossible. It can be done, however. Add compressed yeast softened in one cup water. Add flour and knead. Let

rise until about double its bulk, knead again, and put in pans. When light, bake in a moderate oven for at least an hour.

If dried yeast is used, a sponge should be made from about one-half cup liquid taken from the amount given in the proportions and some of the flour. This is allowed to rise before adding the cornmeal mixture and the remainder of the flour.

Yeast Oatmeal Bread

One cup liquid (milk and water), two tablespoons sugar, one tablespoon fat, one teaspoon salt, one-half cake compressed yeast softened in one-fourth cup liquid, one cup rolled oats, two and one-half cups wheat flour.

This proportion makes one loaf of bread.

Scald liquid and pour over rolled oats, sugar, salt, and fat. Let stand until lukewarm. Add yeast softened in warm water. Add flour and knead. Let rise until double its bulk. Knead again and place in pans. When light bake 45 minutes to one hour in a moderate oven.

HOMINY GRIST

"You don't eat grits or rice?"

The Vermont woman shook her head.

"Well, what do you put your gravy on?" was the puzzled question of the Southern woman.

Food economists must answer this if meats stay at present prices. For average Americans will have to learn to use meats as the Italians do, largely for the flavor. Then the something cheap to put your gravy on is necessary. Grits makes an ideal "something," and moreover is a corn product and so a patriotic food.

In the far South hominy grits is a breakfast dish, a dinner dish, or a supper dish. It goes well and quickly with bacon or hash for breakfast. Sometimes a Southern child will stir into his grits a soft-boiled egg, making a complete meal. Usually it is eaten with gravy or butter.

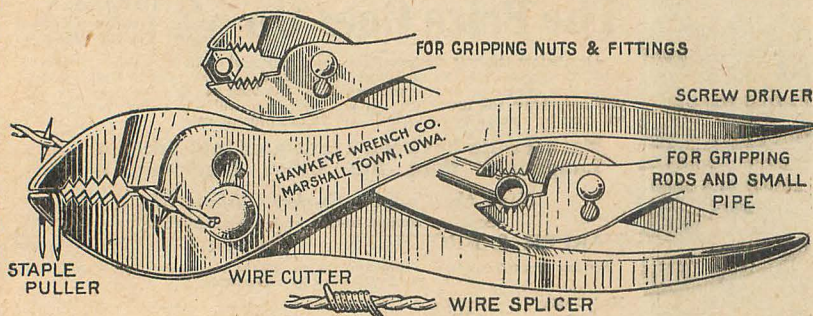
To Cook Hominy Grits

Wash thoroly. Allow three cups of water to one cup of hominy. Salt water to taste. Cook in single boiler until hominy begins to thicken. Then set on back of stove or on asbestos mat and cook slowly until done. Hominy needs about an hour's cooking. It burns very easily. It is much improved by beating in half a cup of milk just before dishing up. The pan in which hominy has been cooked should be put to soak in cold water at once. If hot hominy is poured into a deep dish it can be turned out when cold, cut in slices and browned under the blazer or fried like mush. Fried hominy is usually

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Note: If preferred a pair of self-sharpening shears will be substituted.

North Dakota Farmer

LISBON, - - - - - NORTH DAKOTA

served with duck. It is also an appreciated addition for breakfast.

Baked Hominy Grits

Cook one cup of hominy as directed above. While hot stir in one well-beaten egg and enough milk to make a very thick batter, and a little bacon fat. Bake in deep dish until firmly set. Time depends on depth of dish. Serve with spoon from dish. Baked hominy, toast and bacon is a most satisfactory breakfast. It may be used as a dinner dish like a vegetable. Baked hominy is liked by all who try it.

Those who wish to try out hominy are advised not to serve it as a breakfast food with milk and sugar. It is too starchy to be satisfactory; it needs the flavor of the meat or egg. Serving it as a breakfast food will only prejudice the family against a really valuable food product.

ICED CAFE CHOCOLATE

Cook together one cake of unsweetened chocolate, two cupfuls of granulated sugar and one cupful of water, for ten minutes. Bottle them and keep them for use. When needed fill a glass one-third full of syrup, add two teaspoonfuls of vanilla extract or very strong coffee, fill up the glass with milk, shake well, pile whipped cream on top, and serve very cold.

A THANKSGIVING DINNER

Roast Chicken	Bread Stuffing
	Giblet Gravy
Mashed Potatoes	Turnips Onions
Brown Bread	Currant Jelly
	Salted Peanuts
	Bread and Fruit Pudding
	Lemon Sauce
Squash Pie	Cranberry Tart
Apples	Nuts Raisins

TO BAKE POTATOES

If your oven is in use, try baking your potatoes on top of the stove. Put them on an asbestos mat and cover closely with a large basin. Turn them over once while baking.

GINGER SNAPS

Heat one cupful of molasses and pour over half a cupful of sugar, add half a cupful of soft butter, one tablespoonful of ginger, a teaspoonful of soda, and flour sufficient to roll very thin. Cut, and bake in a quick oven, being careful not to let them get too brown.

POTATOES AU FROMAGE

To one pint of mashed potatoes add half a teaspoonful of salt and half a cupful of sweet milk. Mix in one tablespoonful of grated cheese, place in a buttered baking dish, grate cheese over them (a scant tablespoonful), dot with a teaspoonful of butter and bake brown. This is a good way to utilize left-over mashed potatoes.

REMOVING BAD FLAVORS FROM COOKING VESSELS

To dispose of the objectionable smell and taste in cooking utensils, in which fish, onions, turnips, cabbage, sauerkaut or other rankly flavored food has been cooked, wash the utensil with soap and warm water, and wipe dry; then wash with strong vinegar. No trace of the objectionable odor will be left.

RYE BREAKFAST CAKES

One cupful of molasses, one cupful of milk, one-half cupful of sour cream, one teaspoonful of soda, one-half teaspoonful of salt. Make the mixture about as stiff as a gingerbread dough, with one part of white flour to three parts of rye meal. Bake it in hot gem pans, and serve with butter. Caraway seeds may be added when making the cakes for afternoon tea.

PINEAPPLE PIE (Prize Recipe)

Have ready baked the crust for two pies and pour into them a filling made from 1 cup of sugar, 1 cup of sweet cream, 1 small can of grated pineapple 2 tablespoons of cornstarch, 3 egg yolks, beaten slightly, and 1 tablespoon of butter. Mix all together as for other cream fillings and cook in a double boiler till the mixture thickens. When cool, spread over the top a meringue made by beating the 3 egg whites with 3 tablespoons of sugar. Brown in a quick oven.

CANADIAN WAR-CAKE

No recipe has been more popular than the one for Canadian War-cake. Many people like this plain cake better than the cakes that call for butter, eggs and milk.

Two cups of brown sugar; 2 cups of hot water; 4 tablespoons of lard; 1 teaspoon of salt; 1 teaspoon of ground cinnamon; 1 teaspoon of ground cloves; 1 cup of raisins.

Boil all these ingredients for five minutes after they begin bubbling. When cold add 3 cups of flour, and 2 teaspoons of soda dissolved in 1 tea-

spoon of hot water. Bake in two loaves in slow oven an hour and a quarter.

RICE GRIDDLE CAKES

One cup milk, one egg, one tablespoon fat, one cup boiled rice, one cup flour, two teaspoons baking powder, one-fourth teaspoon salt.

Mix milk, egg, melted fat, and rice. Add to dry ingredients sifted together.

BREAD CRUM FRIDDLE CAKES

Two and one-fourth cups milk, two tablespoons fat, one and one-half cup dry bread crumbs, one egg, one-half cup flour, three teaspoons baking powder, one-half teaspoon salt.

Add fat to scalded milk and pour over bread crumbs. Let stand about ten minutes or until crumbs are soft. Add beaten egg, and combine with the flour, baking powder, and salt, sifted together. If crumbs are not dry, use a little less liquid.

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